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ABSTRACT

The ERIC/EECE Digests in this compilation focus on different aspects of the education and care of children from birth through 12 years of age. The four digests produced in 1989 concern the escalating kindergarten curriculum, involvement of parents in the education of their children, mixed-age groups in early childhood education, and praise in the classroom. The eight digests from 1988 focus on the training and qualifications of child care directors, cooperative learning strategies for children, creativity in young children, cooperative problem solving in the classroom, critical issues in the provision of infant day care, latchkey children and school-age child care, the nature of children's play, and young children's oral language development. The 12 digests produced in 1987 deal with ability grouping in elementary schools, the development of social competence, early childhood classrooms and computers, "hothousing" of young children, trade-offs between program quality and affordability in early childhood programs, readiness for kindergarten, screening for school entry, the shifting kindergarten curriculum, the shy child, training of day care providers, and what young children should be learning. Digests produced before 1987 address the assessment of preschoolers' development, homework policies, full- or half-day kindergarten, and parents and schools. Materials concerning the ERIC System are provided. (RH)

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# ERIC/EECE Digests

## Related to the Education and Care of Children from Birth Through 12 Years of Age

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EDO-PS-89-2

# Escalating Kindergarten Curriculum

Lorrie A. Shepard and Mary Lee Smith

The practice of kindergarten retention is increasing dramatically. In some districts, as many as 60% of kindergartners are judged to be unready for first grade. These children are provided with alternative programming: developmental kindergarten (followed by regular kindergarten), transition or pre-first grade, or the repeating of kindergarten.

An extra year before first grade is intended to protect unready children from entering too soon into a demanding academic environment where, it is thought, they will almost surely experience failure. The extra year is meant to be a time when immature children can grow and develop learning readiness skills, and children with deficient prereading skills can strengthen them. When parents are asked to agree to retention or transition placement, they are often told that with an extra year to grow, their children will move to the top of their classes and become leaders.

Advocates of kindergarten retention are undoubtedly well-intentioned. They see retention as a way for the school to respond to children's enormous differences in background, developmental stages, and aptitude. They view retention as a means of preventing failure before it occurs.

## What Research Says About Retention

The research on kindergarten retention which we conducted from 1984-88 led to three major findings:

1. Kindergarten retention does nothing to boost subsequent academic achievement;
2. Regardless of what the extra year may be called, there is a social stigma for children who attend an extra year;
3. Retention actually fosters inappropriate academic demands in first grade.

We have located 14 controlled studies that document effects of kindergarten retention. Six were included in Gredler's (1984) major review of research on transition rooms, and eight were newly indentified empirical studies. The dominant finding is one of no difference between retained and promoted children. Gredler concluded that at-risk children promoted to first grade performed as well or better than children who spent an extra year in transition rooms. In another study, retained children were matched with promoted children. At the end of first grade, children in the two groups did not differ on standardized math scores or on teacher ratings of reading and math achievement, learner self-concept, social maturity, and attention span (Shepard and Smith, 1985).

Though many retention advocates cite findings that seem to be positive, these studies are often flawed. A major flaw is the absence of a control group. A control group is a critical element in the process of determining differences between children who have been promoted and children who have been retained or placed in transition classes. Studies with control groups consistently show that readiness gains do not persist into the next grade. Children end up at approximately the same percentile rank compared to their new grade peers as they would have had they stayed with their age peers. Furthermore, young and at-risk students who are promoted perform as well in first grade as do retained students.

Tests that are used to determine readiness are not sufficiently accurate to justify extra-year placements. For example, Kaufman and Kaufman (1972) have provided the only reliability data on the widely used Gesell School Readiness Test. They found a standard error of measurement equivalent to six months; in other words, a child who is measured to be at a developmental level of 4 1/2 years, and thus unready for school, could easily be at a development level of 5 years, and fully ready. As many as 30-50% of children will be falsely identified as unready (Shepard & Smith, 1986). Kindergarten teachers are generally unaware of these end results. They know only that retained children do better than they did in their first year of kindergarten. In the short run, teachers see progress: longer attention spans, better compliance with classroom rules, and success with paper and pencil tasks that were a struggle the year before. But these relatively few academic benefits do not usually persist into later grades.

## Social Stigma of Retention

Retained children understand that because of something that is wrong with them, they cannot go on with their classmates. Retained children know that they are not making normal progress. They also know the implicit meaning of placement in ability groups such as "the bluebird reading group."

Kindergarten retention is traumatic and disruptive for children. This conclusion is supported by our extensive interviews with parents of retained children. Most parents report significant negative emotional effects associated with retention. Parents' qualitative assessments of their retained children also support our arguments about the social stigma of retention. Kindergarten retention also has a negative consequence over the long run. Children who are too old for their grade are much more likely than their classmates to drop out of school.

### The Escalating Kindergarten Curriculum

The fad to flunk kindergartners is the product of inappropriate curriculum. For the last 20 years, there has been a persistent escalation of academic demand on kindergartners and first-graders. In one survey, 85% of elementary principals indicated that academic achievement in kindergarten has medium or high priority in their schools (Educational Research Service, 1986). Many middle-class parents who visit their child's school convey the message that their only criterion for judging a teacher's effectiveness is the teacher's success in advancing their child's reading accomplishments. What was formerly expected for the next grade has been shoved downward into the lower grade. More academics borrowed from the next grade is not necessarily better learning. A dozen national organizations have issued position statements decrying the negative effects of a narrow focus on literacy and mathematical proficiency in the earliest grades (National Association for the Education of Young Children, 1988).

Many kindergarten teachers acknowledge that extra-year programs would be unnecessary if children went on to a flexible, child-centered first grade. But educators do not express an awareness that retention may actually contribute to the escalation of curriculum. Teachers naturally adjust what they teach to the level of their students. If many children are older and read, then teachers will not teach as if the room were full of five-year-olds. The subtle adjustment of curricular expectations to the capabilities of an older, faster-moving group is demonstrated in the research literature on school entrance ages (Shepard & Smith, 1988). The victims of inappropriate curriculum are the children judged inadequate by its standards: children who can't stay in the lines and sit still long enough.

### Alternatives to Retention

One alternative can be found in schools where teachers and principals are committed to adapting curriculum and instructional practices to a wide range of individual differences. In such schools, a child who is not yet proficient is not failed. The kindergarten teacher begins at the child's level and moves him along to the extent possible. The first-grade teacher picks up where the kindergarten teacher left off. In between-grade arrangements, children move freely across grade boundaries in such activities as cross-age tutoring or student visits to the next grade for three hours a week. The average standardized achievement test scores for third graders in these schools are no different from those of students in high-retaining schools.

Schools with appropriate curriculum and collegial understandings among teachers and principals make retention unnecessary. Once the larger context of curriculum escalation is understood, teachers and principals may have greater incentive to resist the pressures and accountability culture that render more and more children "unready."

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# Involving Parents in the Education of Their Children

**Patricia Clark Brown**

When parents are involved in their children's education, both children and parents are likely to benefit. Researchers report that parent participation in their children's schooling frequently:

- enhances children's self-esteem
- improves children's academic achievement
- improves parent-child relationships
- helps parents develop positive attitudes towards school and a better understanding of the schooling process.

Despite these advantages, it is not always easy for parents to find time and energy to become involved or to coordinate with schedules for school events. For some parents, a visit to school is perceived as an uncomfortable experience, perhaps a holdover from their own school days. Others may have their hands full with a job and other children. The availability and cost of babysitters are other factors. Recently, teachers and other school staff have made special efforts to increase communication with parents and encourage involvement in children's learning experiences.

### Ways to Involve Parents

One kind of parental involvement is school-based and includes participating in parent-teacher conferences and functions, and receiving and responding to written communications from the teacher. Parents can also serve as school volunteers for the library or lunchroom, or as classroom aides. In one survey, almost all teachers reported talking with children's parents—either in person, by phone, or on open school nights—and sending notices home (Becker & Epstein, 1982). These methods, along with requests for parents to review and sign homework, were most frequently used to involve parents.

Parents can participate in their children's schools by joining Parent Teacher Associations (PTAs) or Parent Teacher Organizations (PTOs) and getting involved in decision-making about the educational services their children receive. Almost all schools have a PTA or PTO, but often only a small number of parents are active in these groups.

Another kind of involvement is home-based and focuses on activities that parents can do with their children at home or on the teacher's visits to the child's home. However, few teachers involve parents through home-based activities, partly because of the amount of time involved in developing activities or visiting and partly because of the difficulty of coordinating parents' and teachers' schedules.

### Ways to Reach Parents

Some programs aim to reach parents who do not usually participate in their children's education. Such programs provide flexible scheduling for school events and parent-teacher conferences, inform parents about what their children are learning, and help parents create a supportive environment for children's learning at home.

Many schools have responded to the needs of working parents by scheduling conferences in the evening as well as during the day, and by scheduling school events at different times of the day throughout the year.

It is important for teachers to keep the lines of communication open. This involves not only sending regular newsletters and notes, but also obtaining information from parents. Phone calls are a greatly under-used technique for keeping in touch. A teacher usually calls a parent to report a child's inappropriate behavior or academic failure. But teachers can use phone calls to let parents know about positive behavior and to get input. Parents justifiably become defensive if they think that every phone call will bring a bad report. If teachers accustom parents to receiving regular calls just for keeping in touch, it is easier to discuss problems when they occur.

Teachers need to consider families' lifestyles and cultural backgrounds when planning home activities. However, some activities can be adapted to almost any home situation. These are activities that parents or children engage in on a day-to-day basis. Teachers can encourage parents and children to do these activities together, and can focus on the opportunities that the activities provide for learning. For example, although television viewing is a pastime for most children and adults, they do not often watch shows together. Teachers can suggest appropiate programs and send home questions for families to discuss. This discussion can be carried over into class.

Busy parents can include children in such everyday activities as preparing a meal or grocery shopping. Teachers can also suggest that parents set aside a time each day to talk with their children about school. Parents may find this difficult if they have little idea of what occurs in school. Notes on what the children have been working on are helpful. Parents and children can discuss current events using teacher-provided questions. Teachers often suggest the activity of reading aloud to children. Reading to children is an important factor in increasing their interest and ability in reading. Teachers can also encourage children to read to parents. In areas where children may not have many books, schools can lend books, and teachers can provide questions for parents and children to discuss.

Home activities allow parents flexibility in scheduling, provide opportunities for parents and children to spend time together, and offer a relaxed setting. To be most beneficial, home activities should be interesting and meaningful—not trivial tasks that parents and children have to "get through." When teachers plan home activities, they often think in terms of worksheets or homework that will reinforce skills learned in school. But parents often grow tired of the endless stream of papers to be checked and the time spent on "busywork." Another danger of promoting home activities is the possibility that there may arise an unclear distinction of roles, with teachers expecting parents to "teach" at home. Teachers and parents need to understand that their roles are different, and that their activities with children should be different.

## Difficulties in Involving Parents

All teachers experience the frustration of trying to involve parents and getting little response. Teachers complain that parents do not come to conferences or school open houses, check homework, or answer notes. This leads some teachers to conclude that parents do not care about their children's education. While it is true that the emotional problems of a few parents may be so great as to prevent them from becoming involved with their children's education, most parents do care a great deal. This caring is not, however, always evidenced by parent attendance at school events. There are a number of reasons why these parents may not become involved, and teachers need to consider these before dismissing parents as uninterested.

For many parents, a major impediment to becoming involved is lack of time. Working parents are often unable to attend school events during the day. In addition, evenings are the only time these parents have to spend with their children, and they may choose to spend time with their family rather than attend meetings at school.

For many apparently uninvolved parents school was not a positive experience and they feel inadequate in a school setting. Parents may also feel uneasy if their cultural style or socioeconomic level differ from those of teachers (Greenberg, 1989). Some parents who are uninvolved in school may not understand the importance of parent involvement or may think they do not have the skills to be able to help. Even parents who are confident and willing to help may hesitate to become involved for fear of overstepping their bounds. It is the responsibility of teachers and administrators to encourage such parents to become involved.

## Conclusion

The suggestions offered in this digest can help teachers involve parents who might not otherwise be involved. While it is possible for a teacher to implement such a parent involvement program alone, it is much easier if the school as a whole is committed to the program. Administrative staff can relieve some of the burden of implementing a comprehensive parent involvement program, and can offer help and support to teachers.

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# Mixed-Age Groups in Early Childhood Education

### Demetra Evangelou

The practice of educating children in mixed-age groups in early childhood education, including the primary grades, has a long history. Mixed-age grouping has also been known as *heterogeneous, multi-age, vertical, ungraded* or *nongraded*, and *family grouping*. Cross-age tutoring is another method of altering traditional ways of grouping children in their early years.

If current trends in maternal employment continue, increasing numbers of young children will spend larger proportions of their preschool years in care outside of their homes (Katz, 1988). Young children who are cared for at home are unlikely to spend large amounts of time in groups of children of the same age. Natural family units are typically heterogeneous in age. The family group provides all members with the opportunity to observe, emulate and initiate a wide range of competencies.

It is assumed that the wider the range of competencies manifested in a mixed-age group, the greater the opportunities for group members to develop relationships and friendships with others who match, complement, or supplement the participants' own needs and styles. The greater diversity of maturity and competence present in a mixed-age group, as compared to a same-age group, provides a sufficient number of models to allow most participants to identify models suitable for their learning.

Given that spontaneously formed peer groups are typically heterogeneous in composition, the separation of children into same-age groups in early childhood education settings is questionable. This grouping practice is based on the assumption that chronological age is the single most reliable developmental index. This assumption has led to the extensive screening and testing related to kindergarten entrance. But developmental indexes other than chronological age—indexes such as social, emotional, and cognitive level of maturity—can be used.

## Advantages of Mixed-Age Classes

In mixed-age classes, it may be easier for kindergarten and preschool teachers to resist the "push-down" tendency—the trend to introduce the primary school curriculum into kindergarten and preschool classes (Gallagher & Coche, 1987). Because mixed-age grouping invites cooperation and other prosocial behaviors, the discipline problems of competitive environments can often be minimized.

A mixture of ages within a class can be particularly desirable for children functioning below age group norms in some areas of their development. These children may find it less stressful to interact with younger peers than with same-age peers. Such interactions can enhance younger children's motivation and self-confidence.

## Social Development in Mixed-Age Groups

Prosocial behaviors are often treated as indices of social development. Prosocial behaviors such as help-giving, sharing, and turn-taking facilitate interaction and promote socialization. Social perceptions also play an important role in the development of social competence. They are an essential part of a child's increasing social awareness. The formation of friendships is often based on a child's perceptions of the roles of peers in a variety of social contexts.

Research evidence suggests that children of different ages are usually aware of differences and attributes associated with age. Consequently, both younger and older children in mixed-age groups differentiate their expectations depending on the ages of the participants. Interaction in mixed-age groups elicits prosocial behaviors that are important in the social development of the young child.

A number of studies indicate that mixed-age grouping can provide remedial benefits for at-risk children. For example, it has been established that children are more likely to exhibit prosocial behaviors (Whiting, 1983) and offer instruction (Ludeke & Hartup, 1983) to younger peers than to age-mates. Children are also more likely to establish friendships (Hartup, 1976) and exhibit aggression with age-mates, and to display dependency with older children. The availability of younger and therefore less threatening peers in mixed-age groups offers the possibility of remedial effects for children whose social development is at risk.

## Cognitive Development in Mixed-age Groups

Research suggests that the effect of mixed-age grouping on cognition is likely to derive from the cognitive conflict arising from children's interaction with peers of different levels of cognitive maturity. In their discussion of cognitive conflict, Brown and Palinscar (1986) make the point that the contribution of such cognitive conflict to learning is not simply that the less-informed child imitates the more knowledgeable one. The interaction between the children leads the less-informed member to internalize new understandings.

Along the same lines, Vygotsky (1978) maintains that the internalization of new understandings, or *cognitive restructuring*, occurs when concepts are actually transformed and not merely replicated. According to Vygotsky, internalization takes place when children interact within the "zone of proximal development." Vygotsky (1978) defines this zone as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p.86).

Slavin (1987) suggests that in terms of the Vygotskian concept of the "zone of proximal development," the discrepancy between what an individual can do with and without assistance can be the basis for cooperative peer efforts that result in cognitive gains. In Slavin's view, "collaborative activity among children promotes growth because children of similar ages are likely to be operating within one another's zones of proximal development, modeling in the collaborating group behaviors more advanced than those they could perform as individuals" (p. 1162). Brown and Reeve (1985) maintain that instruction aimed at a wide range of abilities allows the novice to learn at his own rate and to manage various cognitive challenges in the presence of "experts."

## Implications for Early Childhood Education

Mixed-age interaction among young children can offer a variety of developmental benefits to all participants. However, this is not to suggest that merely mixing children of different ages in a group will guarantee that the benefits mentioned earlier will be realized. Before grouping, one must consider the optimum age range, the proportion of older to younger children, the allocation of time to the mixed-age group and the curriculum and teaching strategies that will maximize the educational benefits for the group. The empirical data on the educational principles that should guide instruction in mixed-age environments are not yet available. When the data become available, they should support the position that mixed-age group interaction can have unique adaptive, facilitating and enriching effects on children's development.

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# Praise in the Classroom

## Randy Hitz and Amy Driscoll

Most educators agree that children need to be in supportive, friendly environments. But recent research indicates that some teacher attempts to create such environments by using praise may actually be counterproductive.

The purpose of this digest is to give teachers new insights into ways to make their statements of praise more effective and consistent with the goals most early childhood educators have for children, namely, to foster self-esteem, autonomy, self-reliance, achievement, and motivation for learning. Most teachers praise students in order to enhance progress toward these goals. However, current research poses the possibility that some common uses of praise may actually have negative effects in some or all of these areas.

### Praise: Effects on Self-Esteem and Autonomy

Some praise statements may have the potential to lower students' confidence in themselves. In a study of second graders in science classrooms, Rowe (1974) found that praise lowered students' confidence in their answers and reduced the number of verbal responses they offered. The students exhibited many characteristics indicative of lower self-esteem, such as responding in doubtful tones and showing lack of persistence or desire to keep trying. In addition, students frequently tried to "read" or check the teacher's eyes for signs of approval or disapproval.

In a series of six studies of subjects ranging in age from third grade to adult, Meyer (1979) found that under some conditions, praise led recipients to have low expectations of success at difficult tasks, which in turn decreased the persistence and performance intensity at the task. It seems that certain kinds of praise may set up even the most capable students for failure. No student can always be "good" or "nice" or "smart." In order to avoid negative evaluations, students may tend not to take chances and attempt difficult tasks.

### Praise as a Motivator

Many teachers attempt to use praise as a form of positive reinforcement in order to motivate students to achieve and behave in positive ways. However, as Brophy (1981) points out, trying to use praise as a systematic reinforcer in a classroom setting is impractical. Even if teachers were able to praise frequently and systematically, say once every 5 minutes, the average student would still be praised less than once every 2 hours. Brophy's research disclosed the reality that much teacher praise is not deliberate reinforcement, but rather, is elicited by students—the students actually condition the teacher to praise them.

Even if teachers could praise students systematically, there is still some indication that such praise would not be effective. Researchers point out that at best praise is a weak reinforcer. Not all young children are interested in pleasing the teacher, and as children grow older, interest in pleasing the teacher diminishes significantly. Esler (1983) reports that correlations between teachers' rates of praise and students' learning gains are not always positive, and even when correlations are positive, they are usually too low to be considered significant.

Some researchers (Martin, 1977; Stringer and Hurt, 1981) have found that praise can actually lessen self-motivation and cause children to become dependent on rewards. Green and Lepper (1974) found that once teachers began praising preschool children for doing something they were already motivated to do, the children became less motivated to do the activity.

Research demonstrates that various forms of praise can have different kinds of effects on different kinds of students. Students from different socioeconomic classes, ability levels, and genders may not respond in the same way to praise. The use of praise is further complicated by the fact that it may have differential effects depending on the type of achievement being measured. For example, praise may be useful in motivating students to learn by rote, but it may discourage problem solving.

### Praise as a Classroom Management Tool

Teachers of young children are especially likely to try to use praise as a way to manage individuals or groups of children. A statement such as "I like the way Johnny is sitting," is often aimed not only at Johnny's behavior but also at nudging children in the group to conform. Teachers of older students would never get away with such control techniques. Even young children who may not be able to articulate their frustration with such blatant manipulation may show their resentment by defiantly refusing to conform or by imitating the "misbehaving" child.

Kounin (1970) did extensive observations in kindergarten classrooms in order to gain insight into effective management practices. He found that smoothness and maintenance of the momentum of classroom instruction and activities were the most powerful variables in controlling deviant behavior and maintaining student attention. Praise did not contribute to effective classroom management.

### Praise Versus Encouragement

Research does indicate that there are effective ways to praise students. The terms *effective praise* and *encouragement* are often used by researchers and other professionals to describe the same approach. In this paper, we will refer to both as *encouragement*.

To praise is "to commend the worth of or to express approval or admiration" (Brophy, 1981, p.5). Dreikurs and others (1982) say that praise is usually given to a child when a task or deed is completed or is well done. Encouragement, on the other hand, refers to a positive acknowledgment response that focuses on student efforts or specific attributes of work completed. Unlike praise, encouragement does not place judgment on student work or give information regarding its value or implications of student status. Statements such as "You draw beautifully, Marc," or "Terrific job, Stephanie," are examples of praise. They are nonspecific, place a judgment on the student, and give some indication of the student's status in the group.

Encouragement, on the other hand:

- Offers specific feedback rather than general comments. For example, instead of saying, "Terrific job," teachers can comment on specific behaviors that they wish to acknowledge.
- Is teacher-initiated and private. Privacy increases the potential for an honest exchange of ideas and an opportunity for the student to talk about his or her work.
- Focuses on improvement and efforts rather than evaluation of a finished product.
- Uses sincere, direct comments delivered with a natural voice.
- Does not set students up for failure. Labels such as *nice* or *terrific* set students up for failure because they cannot always be *nice* or *terrific.*
- Helps students develop an appreciation of their behaviors and achievements.
- Avoids competition or comparisons with others.
- Works toward self-satisfaction from a task or product.

Children have an intrinsic desire to learn. Ineffective praise can stifle students' natural curiosity and desire to learn by focusing their attention on extrinsic rewards rather than the intrinsic rewards that come from the task itself (Brophy, 1981). This kind of praise replaces a desire to learn with blind conformity, a mechanical work style, or even open defiance. On the other hand, teachers who encourage students create an environment in which students do not have to fear continuous evaluation, where they can make mistakes and learn from them, and where they do not always need to strive to meet someone else's standard of excellence. Most students thrive in encouraging environments where they receive specific feedback and have the opportunity to evaluate their own behavior and work. Encouragement fosters autonomy, positive self-esteem, a willingness to explore, and acceptance of self and others.

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# Child Care Directors' Training and Qualifications

**Paula Jorde-Bloom**

The director's role in the early childhood center is central and complex. While there is agreement about the need for highly trained personnel to serve as directors, there is a surprising lack of agreement about directors' training and minimum qualifications. This digest provides an overview of the competencies needed for effective center administration and summarizes state regulations governing minimum qualifications.

## The Multifaceted Role of the Child Care Director

The skills and competencies needed to effectively administer a child care center vary according to the age and background of the children enrolled, the services provided, the philosophical orientation of the program, the local sponsorship of the center, and program size. Directors of very small programs may have few administrative tasks and may serve as a classroom teacher part of the day, while directors of large programs may have to coordinate multiple sites and funding sources and a large staff. Researchers and teachers agree that four major task performance areas are encompassed in the director's role:

*Organization, Leadership and Management.* Directors are expected to:

- assess program needs,
- articulate a clear vision,
- implement goals,
- evaluate program effectiveness,
- recruit, train, and supervise staff,
- translate program goals into well-written policies and procedures,
- know about leadership styles and group behavior,
- understand their professional identity and responsibility,
- be alert to changing demographics, social and economic trends, and developments in the field.

*Child Development and Early Childhood Programming.* Directors need to assess each child's needs and assist staff in planning developmentally appropriate experiences. Their organizational skills can be used to implement effective systems to keep track of enrollment, attendance, and anecdotal data. Directors need to understand:

- developmental patterns in early childhood and their implications for child care,
- environmental psychology and the arrangements of space and materials that support development,
- health, safety, and nutrition in care programs.

*Fiscal and Legal Considerations.* Directors are expected to know federal, state, and local regulations governing child care centers, and be able to develop a budget, set tuition rates, prepare financial reports, maintain insurance coverage, and use fundraising and grantsmanship to secure funding from various sources.

*Board, Parent, and Community Relations.* Directors need to be able to:

- articulate a rationale for program practices to the advisory board, owner, or sponsor,
- interpret child development for parents and others in the community,
- regularly contact professional organizations, congressional representatives, public schools, the media, community service and other groups,
- understand the dynamics of family life,
- be aware of community resources that can support efforts in marketing and in serving parents.

## State Regulations Governing Minimum Qualifications

There are no federal regulations governing the qualifications of directors. Standards are mainly determined by state regulatory bodies. In most states, regulation of child care personnel is tied to center licensing and falls under the auspices of the Department of Public Welfare or the state's equivalent to the Department of Child and Family Social Services. Among states, regulations for almost every requirement differ with striking diversity (Morgan, 1987). The regulations are neither consistent nor specific.

Requirements for child care personnel are not uniformly regulated, as are requirements for entry into primary education positions (Berk, 1985). Some states do not differentiate personnel roles in child care settings, and place directors in the broad category of *child worker*. Others define a second level of teacher more highly qualified in child development than other teachers, but do not necessarily designate this person to fill the role of director. States that set requirements for directors often use quite different terms to define the director's role.

*Background Qualifications.* The minimum age for directors is set at 18 or 21 in most states. Some states require demonstrated proficiency in basic literacy skills. In 9 states, directors are not required to have any relevant qualifying education. Several states require high school education, but only if the centers employ someone else to be responsible for programmatic aspects (Morgan, 1987). Directors are required to be well-qualified in child development in 26 states, and 10 require substantial coursework. Only 6 states require directors to have had courses in administration. Ongoing training for directors is required by 12 states (Morgan, 1987).

*Experience and Formal Education Qualifications.* In the past, states often equated a year of experience with a year of college. But research has shown that education in early childhood or child development has a far stronger positive impact than years of experience on teacher behavior and student achievement. States are increasingly linking levels of experience to formal educational requirements.

### Current Levels of Training and Experience

Child care directors are overwhelmingly (88-92%) female. They are experienced, averaging over 9 years in the field of early childhood. The baccalaureate is held by 78%, and 38% have a master's or doctorate. The level of formal training appears to have increased in the last 15 years.

Child care directors are typically promoted to their positions from the ranks of teachers. Of the directors Norton and Abramowitz (1981) surveyed, 78% were head teachers or assistant directors before they assumed their positions. Interest and experience, rather than formal training, seem to be the primary criteria for promotion. Directors with concentrated course work in child care management are rare. Most have put together a patchwork of coursework, in-service professional development, and on-the-job training. Only recently have intensive graduate programs in child care administration appeared (Jorde-Bloom, 1987; Manburg, 1984).

### Conclusion

Current trends reflect awareness of the importance of the child care director. Several states are making a concerted effort to increase minimum qualifications. A tendency toward professionalization is emerging. Directors are receiving more education, increasing participation in professional organizations, and using training opportunities to increase their expertise in administration.

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# Cooperative Learning Strategies and Children

**Lawrence Lyman and Harvey C. Foyle**

Cooperative learning is a teaching strategy involving children's participation in small group learning activities that promote positive interaction. This digest discusses the reasons for using cooperative learning in centers and classrooms, ways to implement the strategy, and the long-term benefits for children's education.

### Why Try Cooperative Learning?

Cooperative learning promotes academic achievement, is relatively easy to implement, and is not expensive. Children's improved behavior and attendance, and increased liking of school, are some of the benefits of cooperative learning (Slavin, 1987).

Although much of the research on cooperative learning has been done with older students, cooperative learning strategies are effective with younger children in preschool centers and primary classrooms. In addition to the positive outcomes just noted, cooperative learning promotes student motivation, encourages group processes, fosters social and academic interaction among students, and rewards successful group participation.

### Can Cooperative Learning Be Used in Early Childhood Classes?

When a child first comes to a structured educational setting, one of the teacher's goals is to help the child move from being aware only of himself or herself to becoming aware of other children. At this stage of learning, teachers are concerned that children learn to share, take turns, and show caring behaviors for others. Structured activities which promote cooperation can help to bring about these outcomes. One of the most consistent research findings is that cooperative learning activities improve children's relationships with peers, especially those of different social and ethnic groups.

When children begin to work on readiness tasks, cooperation can provide opportunities for sharing ideas, learning how others think and react to problems, and practicing oral language skills in small groups. Cooperative learning in early childhood can promote positive feelings toward school, teachers, and peers. These feelings build an important base for further success in school.

### What Are the Advantages of Cooperative Learning for Elementary School Students?

According to Glasser (1986), children's motivation to work in elementary school is dependent on the extent to which their basic psychological needs are met. Cooperative learning increases student motivation by providing peer support. As part of a learning team, students can achieve success by working well with others. Students are also encouraged to learn material in greater depth than they might otherwise have done, and to think of creative ways to convince the teacher that they have mastered the required material.

Cooperative learning helps students feel successful at every academic level. In cooperative learning teams, low-achieving students can make contributions to a group and experience success, and all students can increase their understanding of ideas by explaining them to others (Featherstone, 1986).

Components of the cooperative learning process as described by Johnson and Johnson (1984) are complimentary to the goals of early childhood education. For example, well-constructed cooperative learning tasks involve positive interdependence on others and individual accountability. To work successfully in a cooperative learning team, however, students must also master interpersonal skills needed for the group to accomplish its tasks.

Cooperative learning has also been shown to improve relationships among students from different ethnic backgrounds. Slavin (1980) notes: "Cooperative learning methods [sanctioned by the school] embody the requirements of cooperative, equal status interaction between students of different ethnic backgrounds..."

For older students, teaching has traditionally stressed competition and individual learning. When students are given cooperative tasks, however, learning is assessed individually, and rewards are given on the basis of the group's performance (Featherstone, 1986). When children are taught the skills needed for group participation when they first enter a structured setting, the foundation is laid for later school success.

## How Can Teachers Use Cooperative Learning Strategies?

Foyle and Lyman (1988) identify the basic steps involved in successful implementation of cooperative learning activities:

1. The content to be taught is identified, and criteria for mastery are determined by the teacher.

2. The most useful cooperative learning technique is identified, and the group size is determined by the teacher.

3. Students are assigned to groups.

4. The classroom is arranged to facilitate group interaction.

5. Group processes are taught or reviewed as needed to assure that the groups run smoothly.

6. The teacher develops expectations for group learning and makes sure students understand the purpose of the learning that will take place. A time line for activities is made clear to students.

7. The teacher presents initial material as appropriate, using whatever techniques she or he chooses.

8. The teacher monitors student interaction in the groups, and provides assistance and clarification as needed. The teacher reviews group skills and facilitates problem-solving when necessary.

9. Student outcomes are evaluated. Students must individually demonstrate mastery of important skills or concepts of the learning. Evaluation is based on observations of student performance or oral responses to questions; paper and pencil need not be used.

10. Groups are rewarded for success. Verbal praise by the teacher, or recognition in the class newsletter or on the bulletin board can be used to reward high-achieving groups.

## Conclusion

Early childhood educators can use many of the same strategies and activities currently being used to encourage cooperation and interaction in older children. Effective cooperative learning experiences increase the probability of children's success throughout their school years.

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# Creativity in Young Children

## James D. Moran III

The precursors of adult creativity are clearly evident in young children. This digest explores factors that affect creativity in children and techniques for fostering this quality. The need to study creativity, and the definition of creativity within a developmental framework, are also discussed.

### Why Study Creativity in Young Children?

Just as all children are not equally intelligent, all children are not equally creative. But just as all children exhibit behaviors which evidence intelligence from birth, they also exhibit behaviors which evidence the potential for creativity.

Creativity is essentially a form of problem-solving. But it is a special type of problem-solving—one that involves problems for which there are no easy answers: that is, problems for which popular or conventional responses do not work. Creativity involves adaptability and flexibility of thought. These are the same types of skills that numerous reports on education (e.g., the Carnegie Report, 1986) have suggested are critical for students.

### What Is Creativity?

Creativity has been considered in terms of process, product or person (Barron and Harrington, 1981) and has been defined as the interpersonal and intrapersonal process by means of which original, high quality, and genuinely significant products are developed. In dealing with young children, the focus should be on the process, i.e., developing and generating original ideas, which is seen as the basis of creative potential. When trying to understand this process, it is helpful to consider Guilford's (1956) differentiation between convergent and divergent thought. Problems associated with convergent thought often have one correct solution. But problems associated with divergent thought require the problem-solver to generate many solutions, a few of which will be novel, of high quality, and workable—hence creative.

For a proper understanding of children's creativity, one must distinguish creativity from intelligence and talent. Ward (1974) expressed concern about whether creativity in young children could be differentiated from other cognitive abilities. More recent studies (for example, Moran and others, 1983) have shown that components of creative potential can indeed be distinguished from intelligence. The term "gifted" is often used to imply high intelligence. But Wallach (1970) has argued that intelligence and creativity are independent of each other, and a highly creative child may or may not be highly intelligent.

Creativity goes beyond possession and use of artistic or musical talent. In this context, talent refers to the possession of a high degree of technical skill in a specialized area. Thus an artist may have wonderful technical skills, but may not succeed in evoking the emotional response that makes the viewer feel that a painting, for example, is unique. It is important to keep in mind that creativity is evidenced not only in music, art, or writing, but throughout the curriculum, in science, social studies and other areas.

Most measures of children's creativity have focused on ideational fluency. Ideational fluency tasks require children to generate as many responses as they can to a particular stimulus, as is done in brainstorming. Ideational fluency is generally considered to be a critical feature of the creative process. Children's responses may be either popular or original, with the latter considered evidence of creative potential. Thus when we ask four-year-olds to tell us "all the things they can think of that are red," we find that children not only list wagons, apples and cardinals, but also chicken pox and cold hands.

For young children, the focus of creativity should remain on process: the generation of ideas. Adult acceptance of multiple ideas in a non-evaluative atmosphere will help children generate more ideas or move to the next stage of self-evaluation. As children develop the ability for self-evaluation, issues of quality and the generation of products become more important. The emphasis at this age should be on self-evaluation, for these children are exploring their abilities to generate and evaluate hypotheses, and revise their ideas based on that evaluation. Evaluation by others and criteria for genuinely significant products should be used only with older adolescents or adults.

### What Affects the Expression of Creativity?

For young children, a non-evaluative atmosphere appears to be a critical factor in avoiding what Treffinger (1984) labels as the "right answer fixation." Through the socialization process, children move toward conformity during the elementary school years. The percentage of original responses in ideational fluency tasks drops from about 50% among four-year-olds to 25% during elementary school, then returns to 50% among college students (Moran et al., 1983). It is important that children be given the opportunity to express divergent thought and to find more than one route to the solution.

Rewards or incentives for children appear to interfere with the creative process. Although rewards may not affect the number of responses on ideational fluency tasks, they seem to reduce the quality of children's responses and the flexibility of their thought. In other words, rewards reduce children's ability to shift from category to category in their responses (Groves, Sawyers, and Moran, 1987). Indeed, any external constraint seems to reduce this flexibility. Other studies have shown that structured materials, especially when combined with structured instructions, reduce flexibility in four-year-old children (Moran, Sawyers, and Moore, in press). In one case, structured instructions consisted only in the demonstration of how to put together a model. Teachers need to remember that the structure of children's responses is very subtle. Research suggests that children who appear to be creative are often involved in imaginative play, and are motivated by internal factors rather than external factors, such as rewards and incentives.

### How Can Adults Encourage Creativity?

- Provide an environment that allows the child to explore and play without undue restraints.
- Adapt to children's ideas rather than trying to structure the child's ideas to fit the adult's.
- Accept unusual ideas from children by suspending judgement of children's divergent problem-solving.
- Use creative problem-solving in all parts of the curriculum. Use the problems that naturally occur in everyday life.
- Allow time for the child to explore all possibilities, moving from popular to more original ideas.
- Emphasize process rather than product.

### Conclusion

Adults can encourage creativity by emphasizing the generation and expression of ideas in a non-evaluative framework and by concentrating on both divergent and convergent thinking. Adults can also try to ensure that children have the opportunity and confidence to take risks, challenge assumptions, and see things in a new way.

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# Cooperative Problem-Solving in the Classroom

### Jonathan Tudge and David Caruso

Over the years, early childhood education has stressed the importance of cooperative play and learning for the young child's development (Dewey, 1897). Cooperative learning involves children in the active exchange of ideas rather than passive learning. Research has demonstrated the potential of cooperative problem-solving for enhancing young children's cognitive development and learning.

Cooperative problem-solving is likely to be effective if children share a goal, and have differing perspectives on the best way of attaining it. This sharing of differing points of view in the attempt to achieve a common goal results in cognitive advance. Cooperative problem-solving often occurs in classrooms—for example, when two children attempt to ride on a swing at the same time.

## Piaget and Cooperative Problem-Solving

Research on the effects of collaboration between peers on cognitive development has primarily been based on Piaget's theory concerning the impact of social interaction on cognitive and moral development (Piaget, 1932, 1959). Piaget maintained that opportunities for becoming less egocentric are more common when children discuss things with each other because then they must face the fact that not everyone has the same perspective on a situation. Psychologists have based most of their research in this area on Piaget's theory, and have examined children's performance on conservation tasks, working in pairs and individually. Several researchers have found that children who were paired with a more advanced child were later able to solve conservation tasks at a higher level, while children who worked individually did not improve.

Piagetian scholars argue that cognitive conflict—a difference in perspective that leads to discussion of each partner's opinion—is necessary for development. In trying to resolve conflicts, partners have to explain to each other their points of view. In the course of the explanation, the less advanced child can be led to greater understanding.

Study results (Tudge, 1985, 1986) suggest that in the absence of feedback, cognitive conflict (brought about by pairing children with different perspectives) only helps children who reason at a less advanced level than their partner when the partner is confident of his or her opinions. But in a third study (Tudge, 1987), in which children discovered whether or not their views were correct, children improved regardless of whether their partner initially reasoned at a less or a more advanced level. Thus our research indicates that the effects of cooperative problem-solving are by no means straightforward. We can merely suggest possible consequences of encouraging collaboration in the classroom.

## Guidelines for Teachers

Teachers can encourage children to interact and share their perspectives during cooperative play by:

*Planning activities in which children have a shared goal.*
It is not enough to have children working side by side on an activity. For example, when two children are playing with building blocks together but working on different parts of a structure, they may not be trying to accomplish the same goal. Children who try to achieve a shared objective will find it helpful to discuss their ideas about the problem and agree on a strategy. Teachers can promote real cooperative activity by encouraging collaboration during the activity-planning stage.

*Ensuring that the goal is intrinsically interesting.*
Young children are likely to pursue a goal only if they find it interesting. Quite often, when teachers present problems that they see as important, they inadvertently fail to consider the children's degree of interest in solving the problem. One effective approach for maximizing the child's intrinsic interest is to involve children in activities in which they can determine their own objectives, that is, activities with several possible goals or which offer several ways of reaching the goals.

*Making it possible for children to achieve their goal through their own actions.*
This guideline, suggested by Kamii and DeVries (1978) for physical knowledge activities, can lead to successful cooperative problem-solving. Through acting on objects and observing the effects, young children receive feed-

back, which helps them adapt their differing perspectives when working cooperatively. Rolling a ball down a ramp to hit a target, for example, provides many opportunities for adapting the actions involved. Children can vary the speed and direction of the ball, the slope of the ramp, and so forth. They can discuss why they miss the target and the best way to solve the problem.

*Seeing to it that the results of the child's actions are visible and immediate.*
The give and take of sharing perspectives and strategies during cooperative activity will be encouraged by immediate feedback about the results of children's actions. As Kamii and DeVries (1978) point out, when children see results, they are likely to be motivated to keep trying different strategies. Contrast an activity such as planting seeds, which results in a long-delayed reaction, with a game of target-ball, in which the child chooses the objective, produces the object's action, and observes an immediate result.

### The Teacher's Role in Cooperative Problem-Solving

Because the objective of cooperative problem-solving is for children to share perspectives as they pursue goals, it is essential that teachers encourage and suggest rather than give directions. These guidelines will help teachers in this effort:

1. *Encourage children to interact with each other.*
A teacher might introduce an activity in an open-ended way by saying, "Here's an activity for 2 or 3 children. What do you think we could do with these things, Brett and Sally?" This conveys the importance of each child's perspective and encourages children to come up with their own goals.

2. *Help children clarify or adapt their shared goals.*
In order for children to pursue goals cooperatively, they must agree upon a clearly delineated goal. During early childhood, when children often act first and discuss later, a teacher can play a vital role by helping them clarify their goal before they attempt to solve the problem. Teachers can verbalize the objective for the children. A teacher might say, for example, "I see. You're trying to get this water over there by using the tubes and funnels."

3. *Involve children who are unlikely to initiate.*
Quieter children are less likely than more assertive children to become involved or state their ideas. It is critical for teachers to encourage these children to participate and to help them state their perspectives on the problem.

Teaching strategies that may be appropriate for other activities limit the effectiveness of cooperative problem-solving. Even if children are struggling, it is not appropriate to demonstrate solutions or solve a problem for them. Research suggests that arriving at the correct answer is less important for children's cognitive development than the process of struggling with the problem cooperatively.

### Conclusion

As Damon (1984) points out, when children explore new possibilities jointly, their thinking is not constrained by an expert who "knows better," but rather is limited only by the boundaries of their mutual imaginations. When teachers present problems that children at differing developmental levels can work on together, encourage children's efforts to share perspectives, and help children arrive at a common objective, cooperative problem-solving becomes a valuable part of the curriculum.

This digest was adapted by Sue Ann Kendall from "Cooperative Problem Solving in the Classroom: Enhancing Young Children's Cognitive Development," *Young Children*, November, 1988, pp. 46-52.

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# Infant Day Care: The Critical Issues

### Abbey Griffin and Greta Fein

There is a critical need to increase the availability of quality infant care. If parents, caregivers and policymakers are to understand standards of quality, they must first understand the development of attachment, the effects of early separations, parent characteristics and family circumstances that may contribute to insecurity, and the potential benefits of secure attachment to a caregiver. This digest discusses infant care quality and the debate on infant attachment.

## Infant Day Care Today

In March 1970, 24% of mothers with children under 2 years old were in the labor force. By March 1984, the figure was 46.8% (U.S. Dept. of Labor, 1984). Who takes care of the babies while the mothers work? Some infants (25%) are cared for in their own homes. Others (75%) are cared for outside the home by a baby-sitter, or in family day care (group care by an individual in her home). Only 6% of infants under a year old and 12% of those under 2 are cared for in licensed center-based care (U.S. Dept. of Commerce, June 1982). Although state licensing standards apply to center-based and family day care, most family day care programs remain unlicensed. The crisis in day care is such that the choice of care is often determined by cost and availability, rather than quality.

## What Do We Know About Quality?

Research on university-based day care models and a growing number of studies on community-based caregiving arrangements (baby-sitters, family day care) are identifying indices of quality care. Phillips and Howes (Phillips, 1987) organize information on infant day care quality into three categories: (1) *structural features* (group size, staff-child ratios, caregiver training, equipment, space); (2) *dynamic aspects* (experiences and interactions); and (3) *contextual features* (staff stability and turnover, type of setting).

*Structural Features:* The National Day Care Study (Roupp, Travers, Glantz and Coelen, 1979) found that for children under 2, small group size, low staff-infant ratios, and strong caregiver qualifications, predicted positive outcomes. Caregivers with larger groups spent more time in management tasks and restricting behavior, and less time in one-to-one interaction and cognitive-language stimulation. High adult-infant ratios were associated with increased apathy and distress in infants. Caregivers with little child-related formal education engaged in less frequent positive adult-infant interactions and were less likely to have a developmentally appropriate program.

The optimum standards of the Accreditation Criteria of the National Academy of Early Childhood Programs (Bredekamp, 1984) specifies a maximum group size of 8 and a staff-child ratio of 1:4 for infants under 12 months. For infants of 1 to 2 years, maximum group size should be 12, and staff-child ratio 1:4. The lead teacher in an infant center should have a baccalaureate degree in early childhood education or child development.

*Dynamic Features:* Quality and frequency of adult-child interactions are critical variables in infant care. Children under two rely on and learn from interactions with adults. Adults are the secure base from which infants explore the environment and develop social competence with peers. Adults who talk to infants encourage language development. Adults who respond to infant signals and needs build infants' self-esteem and physical and cognitive abilities (Bredekamp, 1986).

*Contextual Features:* Studies contrasting types of caregiving are limited in number and report mixed results. Most confirm that staff-child ratios, group size, and caregiver stability define quality in infant care. In each type of care, there is great variability in environment and caregiver qualities. Thus child outcomes depend less on form of care than on characteristics of the setting (Phillips, 1987, Clarke-Stewart and Fein, 1984).

Caregiver stability is of concern because of the high turnover rate: 40% in centers and 60% in family day care and out-of-home babysitting (U.S. Dept. of Labor, 1984). Low salaries and inadequate benefits make it difficult to attract and maintain qualified caregivers. Constant changes of caregiver or caregiving arrangement inhibit benefits of care (Ainslie and Anderson, 1984; Phillips and Howes, 1987).

## Effects of Infant Care

Several studies show that day care may benefit low-income children and have benign, if not beneficial, effects on middle-class children. High quality care can prevent the drop in IQ that often occurs between 12 and 30 months in home-reared, low-income children, and enhance their language and problem-solving skills. Greater curiosity, better concentration, and improved on-task behavior have been associated with day care experience in all income groups. Day care children are also seen as being more socially competent and independent (Clarke-Stewart and Fein, 1984; Belsky and Steinberg, 1987).

Research findings on socioemotional development are not unanimous. Several recent studies suggest that development outcomes are related to the infant's experience in a particular caregiving environment (Phillips, 1987). Structural, dynamic, and contextual aspects may determine the infant's quality of life in care, and thus the effects of care. Another concern is age of entry. Some studies indicate that day care children who appear more assertive, less responsive to adults, and more avoidant in reunions with parents, frequently have begun day care before their first birthday.

### Infant Care: The Issue of Attachment

Some researchers suggest that for infants under 1, separation from mother for over 20 hours a week may disrupt development of attachment and thus put some children at-risk for social and emotional problems. Daily separations may represent the kind of unavailability that infants experience as maternal rejection. Maternal rejection or unpredictability are associated with insecure attachment in infants. Other researchers argue that these conclusions are premature, the effects reported are weak, and the studies have serious methodological problems. Critics challenge definitions of negative social behaviors (e.g., aggression, which may really be assertiveness) and indicators of insecurity (e.g., avoidance of mother, which may really indicate precocious independence). These positions have been presented in the special infant day care issues of the *Early Childhood Research Quarterly*.

Studies comparing home versus employed mothers do not tell us what factors affect parents' ability to offer infants the kind of environment associated with secure attachment. For example, stress from balancing work and family is particularly evident in single, adolescent, and low-income families (Ainslie, 1984). In one study, families under stress reported that they spent less time researching day care options, needed longer hours, and used poorer quality care (Phillips, 1987). A satisfactory support system may be important for parents and essential to parents experiencing stress. Mothers of insecurely attached infants may have less harmonious marriages and receive less support from spouses and community. Mothers who prefer to work or to stay at home and do so may have more secure infants than those whose work status is at odds with their preference. Work preference is linked to mothers' anxiety about leaving children. Stress and parent anxiety may make separation and adjustment to care difficult. On the other hand, secure attachment to the caregiver may offset damaging effects on the infant. Quality day care can reduce stress by providing a support system for parents and allaying their concerns about their infant (Ainslie, 1984).

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# Latchkey Children and School-Age Child Care

## Michelle Seligson and Dale B. Fink

Concern about latchkey children has given rise to a wide array of child care programs. These programs are operated by public and private schools, child care agencies, YMCAs and YWCAs, and many other organizations. This digest offers an overview of these school-age child care (SACC) programs and the reasons for their growth.

### Children at Home Alone

A Louis Harris poll of American public school teachers conducted in the fall of 1987 found that 51% ranked "children being left on their own after school" as a significant factor affecting children's performance in school. This factor was cited more often than drugs, poverty, divorce, or any other by the teachers sampled. Parents were surveyed at the same time, and 59% agreed that "we leave our children alone too much after school hours." Subsequently, the National Association for Elementary School Principals (NAESP) queried its own members, and found that 37% of the sample believed that "children would perform better in school" if they weren't left unsupervised so long outside of school hours.

These surveys reflect an emerging consensus which has been in the making over the past decade. Educators are only the latest, and perhaps the most influential, in a parade of civic and professional groups which have gone on record as opposing the growing phenomenon of latchkey children, and supporting the expansion of child care for school-age children. Even the nation's largest employer, the U.S. Army, has decreed that no child under age 12 should be left without supervision after school, and has plans to bring SACC to every Army post.

Escalating interest in SACC has paralleled the rising numbers of children left on their own. It is difficult to determine the actual number of latchkey children in the U.S., in part because parents are reluctant to acknowledge that they leave their children without adult supervision. All agree that the number is in the millions. Many have challenged the estimate of 2.1 million, or 7% of children aged 5 to 13, which was offered by the Bureau of the Census in January of 1987. The parental response to a Harris survey indicated that 12% of elementary and 30% of middle school children were left in self-care. Local studies have yielded even higher estimates: for example, 33% of children were found to be left alone or with a school-age sibling in Michlenburg County, North Carolina.

### Lost Opportunities for Children

The potentially negative effect on school performance of excessive time alone may be the main reason that this issue is catching the attention of teachers and principals. But other groups have enumerated many additional risks to children's health, safety, and emotional and social development.

The research is suggestive rather than conclusive. A 1975 Baltimore study and a 1980 study by a school principal in Raleigh, North Carolina, showed improved school performance by children in SACC as compared to peers who were not enrolled. But a 1985 study at the University of Texas at Dallas found no significant differences in school performance between third graders at home alone and those at home with an adult. A 1985 study at the University of North Carolina found latchkey experience did not affect the self-esteem of fourth and seventh graders. But a 1986 study at the University of Wisconsin found that the further 10- to 15-year-olds were removed from adult supervision, the more likely they were to respond to peer pressure to engage in undesirable behavior.

The loss of opportunities for traditional children's activities is another concern. Most latchkey children will manage to get through their self-care without being injured, sexually victimized, or suffering severe depression. They may even do some chores and finish their homework early. But what of their opportunities to relax with friends, get involved in nature activities, or ride a bike around the neighborhood? As Joan Bergstrom points out in the book, *School's Out,—Now What?*, the way children spend the hours out of school has always been an important aspect of their development (Bergstrom, 1985).

## SACC: Giving Children Opportunities They Need

School-age child care involves almost any program that serves children in kindergarten through early adolescence during hours when schools are closed. These programs are housed, funded, and administered by an impressive array of organizations. It is not uncommon for a program to be initiated by one organization, housed away from the organization, administered by a third party, and funded, at least in part, by yet another source. Organizations providing school-age care include:

- Elementary Schools: The NAESP survey showed that 22% of responding principals had some kind of before- or after-school care in their schools.
- YMCA: Approximately 50% of the 2200 YMCAs in the U.S. are involved in SACC.
- YWCA: About 29,000 children are served through its SACC programs.
- Boys Clubs of America: At least 18% of its 200 clubs now offer school-age child care on an enrollment basis.
- Camp Fire, Inc.: At least 17 of its 300 local councils now operate before- or after-school care programs, mostly in public schools.
- Association for Retarded Citizens: A number of ARCs around the country offer daily after-school care for mentally disabled children.
- Private Schools: The National Association of Independent Schools reports that a steadily rising number of its members are offering extended hours.

There are no national figures about the involvement of Catholic schools in SACC, but ADESTE, a SACC program which began at two parochial schools in West Los Angeles County in 1986, had begun in 67 schools within the Archdiocese by spring 1988.

Several local Easter Seals Societies run school-age child care and summer programs. Some are limited to the disabled.

Although there are no figures available, an increasing number of local recreation and park departments have switched from their traditional drop-in recreation to SACC.

## What Children Do In SACC

Good SACC programs are neither an extension of the school day nor custodial programs which merely keep children out of harm's way. Rather, they provide children with a comfortable environment and a great deal of freedom to move about and choose activities. A good program has a balanced schedule that includes child- and teacher-directed time, as well as opportunities for children to be in large or small groups or concentrate on something by themselves. There are opportunities to try new games or skills, a place to read or do homework, and a varied curriculum. Many programs offer such activities as cooking, arts, storytelling, and sports.

A child who attends SACC is not necessarily denied access to other community activities. Good programs work collaboratively to see that children may attend scout meetings, sports practice, and other activities. Programs with children aged 10 or above have found that pre- and young adolescents need activities tailored for them. Community service, a chance to earn money, and understanding of the adolescent's heavy involvement in peer culture are some of the ingredients of successful SACC for this group.

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# The Nature of Children's Play

## David Fernie

In play, children expand their understanding of themselves and others, their knowledge of the physical world, and their ability to communicate with peers and adults. This digest discusses children's play and its relationship to developmental growth from infancy to middle childhood. The digest also suggests ways in which educators and other adults can support children's play.

### Sensorimotor Play

In what Piaget (1962) aptly described as sensorimotor practice play, infants and toddlers experiment with bodily sensation and motor movements, and with objects and people. By 6 months of age, infants have developed simple but consistent action schemes through trial and error and much practice. Infants use action schemes, such as pushing and grasping, to make interesting things happen. An infant will push a ball and make it roll in order to experience the sensation and pleasure of movement.

As children master new motor abilities, simple schemes are coordinated to create more complex play sequences. Older infants will push a ball, crawl after it, and retrieve it. When infants of 9 months are given an array of objects, they apply the same limited actions to all objects and see how they react. By pushing various objects, an infant learns that a ball rolls away, a mobile spins, and a rattle makes noise. At about 12 months, objects bring forth more specific and differentiated actions. At this age, children will throw or kick a ball, but will shake rattles.

In a toddler's second year, there is growing awareness of the functions of objects in the social world. The toddler puts a cup on a saucer and a spoon in her mouth. During the last half of this year, toddlers begin to represent their world symbolically as they transform and invent objects and roles. They may stir an imaginary drink and offer it to someone (Bergen, 1988). Adults initiate and support such play. They may push a baby on a swing or cheer its first awkward steps. Children's responses regulate the adult's actions. If the swing is pushed too high, a child's cries will guide the adult toward a gentler approach. In interactions with adults such as peekaboo, children learn to take turns, act with others, and engage others in play.

### Pretend Play

As children develop the ability to represent experience symbolically, pretend play becomes a prominent activity. In this complex type of play, children carry out action plans, take on roles, and transform objects as they express their ideas and feelings about the social world (Garvey, 1984).

Action plans are blueprints for the ways in which actions and events are related and sequenced. Family-related themes in action plans are popular with young children, as are action plans for treating and healing and for averting threats.

Roles are identities children assume in play. Some roles are functional: necessary for a certain theme. For example, taking a trip requires passengers and a driver. Family roles such as mother, father and baby are popular, and are integrated into elaborate play with themes related to familiar home activities. Children also assume stereotyped character roles drawn from the larger culture, such as nurse, and fictional character roles drawn from books and television, such as He-Man. Play related to these roles tends to be more predictable and restricted than play related to direct experiences such as family life (Garvey, 1984).

As sociodramatic play emerges, objects begin to influence the roles children assume. For example, household implements trigger family-related roles and action plans, but capes stimulate superhero play. Perceptually bound younger children may be aided by the provision of realistic objects (Fein, 1981). Even three-year-olds can invent and transform objects to conform to plans.

By the age of four or five, children's ideas about the social world initiate most pretend play. While some pretend play is solitary or shared with adults, preschoolers' pretend or sociodramatic play is often shared with peers in the school or neighborhood. To implement and maintain pretend play episodes, a great deal of shared meaning must be negotiated among children. Play procedures may be talked about explicitly, or signaled subtly in role-appropriate action or dialogue. Players often make rule-like statements to guide behavior ("You have to finish your dinner, baby"). Potential conflicts are negotiated. Though meanings in play often reflect real world behavior, they also incorporate children's interpretations and wishes. The child in a role who orders a steak and piece of candy from a pretend menu is not directly copying anything he has seen before.

Construction play with symbolic themes is also popular with preschoolers, who use blocks and miniature cars and people to create model situations related to their experience.

A kind of play with motion, rough and tumble play, is popular in preschool years. In this play, groups of children run, jump, and wrestle. Action patterns call for these behaviors to be performed at a high pitch. Adults may worry that such play will become aggressive, and they should probably monitor it. Children who participate in this play become skilled in their movements, distinguish between real and feigned aggression, and learn to regulate each other's activity (Garvey, 1984).

### Games with Rules

Children become interested in formal games with peers by age five or younger. Older children's more logical and socialized ways of thinking make it possible for them to play games together. Games with rules are the most prominent form of play during middle childhood (Piaget, 1962).

The main organizing element in game play consists of explicit rules which guide children's group behavior. Game play is very organized in comparison to sociodramatic play. Games usually involve two or more sides, competition, and agreed-upon criteria for determining a winner. Children use games flexibly to meet social and intellectual needs. For example, choosing sides may affirm friendship and a pecking order. Games provide children with shared activities and goals. Children often negotiate rules in order to create the game they wish to play (King, 1986). They can learn reasoning strategies and skills from strategy games like checkers. In these games, children must consider at the same time both offensive alternatives and the need for defense. Many card games encourage awareness of mathematics and of the psychology of opponents. Such games can be intellectually motivating parts of pre- and primary school curriculum (Kamii & DeVries, 1980, Kamii, 1985).

### The Adult Role in Children's Play

These general guidelines may be helpful:

- *Value children's play and talk to children about their play.* Adults often say "I like the way you're working," but rarely, "I like the way you're playing."
- *Play with children when it is appropriate, especially during the early years.* If adults pay attention to and engage in children's play, children get the message that play is valuable.
- *Create a playful atmosphere.* It is important for adults to provide materials which children can explore and adapt in play.
- *When play appears to be stuck or unproductive, offer a new prop, suggest new roles, or provide new experiences, such as a field trip.*
- *Intervene to ensure safe play.* Even in older children's play, social conflicts often occur when children try to negotiate. Adults can help when children cannot solve these conflicts by themselves (Caldwell, 1977). Adults should identify play which has led to problems for particular children. They should check materials and equipment for safety. Finally, adults should make children aware of any hidden risks in physical challenges they set for themselves.

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# Young Children's Oral Language Development

**Celia Genishi**

The development of oral language is one of the child's most natural—and impressive—accomplishments. This digest presents an overview of the process and mechanics of language development, along with implications for practice.

## When and How Language Is Learned

Almost all children learn the rules of their language at an early age through use, and over time, without formal instruction. Thus one source for learning must be genetic. Humans beings are born to speak; they have an innate gift for figuring out the rules of the language used in their environment. The environment itself is also a significant factor. Children learn the specific variety of language (dialect) that the important people around them speak.

Children do not, however, learn only by imitating those around them. We know that children work through linguistic rules on their own because they use forms that adults never use, such as "I goed there before" or "I see your feets." Children eventually learn the conventional forms, *went* and *feet*, as they sort out for themselves the exceptions to the rules of English syntax. As with learning to walk, learning to talk requires time for development and practice in everyday situations. Constant correction of a child's speech is usually unproductive.

Children seem born not just to speak, but also to interact socially. Even before they use words, they use cries and gestures to convey meaning; they often understand the meanings that others convey. The point of learning language and interacting socially, then, is not to master rules, but to make connections with other people and to make sense of experiences (Wells, 1986). In summary, language occurs through an interaction among genes (which hold innate tendencies to communicate and be sociable), environment, and the child's own thinking abilities.

When children develop abilities is always a difficult question to answer. In general, children say their first words between 12 and 18 months of age. They begin to use complex sentences by the age of 4 to 4 1/2 years. By the time they start kindergarten, children know most of the fundamentals of their language, so that they are able to converse easily with someone who speaks as they do (that is, in their dialect). As with other aspects of development, language acquisition is not predictable. One child may say her first word at 10 months, another at 20 months. One child may use complex sentences at 5 1/2 years, another at 3 years.

## Oral Language Components

Oral language, the complex system that relates sounds to meanings, is made up of three components: the phonological, semantic, and syntactic (Lindfors, 1987). The phonological component involves the rules for combining sounds. Speakers of English, for example, know that an English word can end, but not begin, with an *-ng* sound. We are not aware of our knowledge of these rules, but our ability to understand and pronounce English words demonstrates that we do know a vast number of rules.

The semantic component is made up of morphemes, the smallest units of meaning that may be combined with each other to make up words (for example, *paper* + *s* are the two morphemes that make up *papers*), and sentences (Brown, 1973). A dictionary contains the semantic component of a language, and reflects not just what words make up that language, but also what words (and meanings) are important to the speakers of the language.

The syntactic component consists of the rules that enable us to combine morphemes into sentences. As soon as a child uses two morphemes together, as in "more cracker," she is using a syntactic rule about how morphemes are combined to convey meaning. Like the rules making up the other components, syntactic rules become increasingly complex as the child develops. From combining two morphemes, the child goes on to combine words with suffixes or inflections (*-s* or *-ing*, as in *papers* and *eating*) and eventually creates questions, statements, commands, etc. She also learns to combine two ideas into one complex sentence, as in "I'll share my crackers if you share your juice."

Of course speakers of a language constantly use these three components of language together, usually in social situations. Some language experts would add a fourth component: pragmatics, which deals with rules of language use. Pragmatic rules are part of our communicative competence, our ability to speak appropriately in different situations, for example, in a conversational way at home and in a more formal way at a job interview. Young children need to learn the ways of speaking in the day care center or school where, for example, teachers often ask rhetorical questions. Learning pragmatic rules is as important as learning the rules of the other components of language since people are perceived and judged based on both what they say and how and when they say it.

**Nurturing Language Development**

Parents and caregivers need to remember that language in the great majority of individuals develops very efficiently. Adults should try not to focus on "problems," such as the inability to pronounce words as adults do (for example, when children pronounce r's like w's). Most children naturally outgrow such things, which are a tiny segment of the child's total repertoire of language. However, if a child appears not to hear what others say to her; if family members and those closest to her find her difficult to understand; or if she is noticeably different in her communicative abilities from those in her age range, adults may want to seek advice from specialists in children's speech, language and hearing.

Teachers can help sustain natural language development by providing environments full of language development opportunities. Here are some general guidelines for teachers, parents, and other caregivers:

- Understand that every child's language or dialect is worthy of respect as a valid system for communication. It reflects the identities, values, and experiences of the child's family and community.
- Treat children as if they are conversationalists, even if they are not yet talking. Children learn very early about how conversations work (taking turns, looking attentively, using facial expressions, etc.) as long as they have experiences with conversing adults.
- Encourage interaction among children. Peer learning is an important part of language development, especially in mixed-age groups. Activities involving a wide range of materials should promote talk. There should be a balance between individual activities and those that nurture collaboration and discussion, such as dramatic play, block-building, book-sharing, or carpentry.
- Remember that parents, caregivers, teachers, and guardians are the chief resources in language development. Children learn much from each other, but adults are the main conversationalists, questioners, listeners, responders, and sustainers of language development and growth in the child-care center or classroom.
- Continue to encourage interaction as children come to understand written language. Children in the primary grades can keep developing oral abilities and skills by consulting with each other, raising questions, and providing information in varied situations. Every area of the curriculum is enhanced through language, so that classrooms full of active learners are hardly ever silent.

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ERIC
Digest

# Ability Grouping in Elementary Schools

### John Hollifield

## What Is Ability Grouping?

Ability grouping of students is one of the oldest and most controversial issues in elementary and secondary schools. Hundreds of research studies have examined the effects of the two most common variants: between-class and within-class ability grouping. Between-class grouping refers to a school's practice of forming classrooms that contain students of similar ability. Within-class grouping refers to a teacher's practice of forming groups of students of similar ability within an individual class.

This digest summarizes the conclusions of Robert E. Slavin's 1986 comprehensive review of research on the different types of ability grouping in elementary schools. The purpose of his review was to identify grouping practices that promote student achievement.

## Why Use Ability Grouping?

In theory, ability grouping increases student achievement by reducing the disparity in student ability levels, and this increases the likelihood that teachers can provide instruction that is neither too easy nor too hard for most students. The assumption is that ability grouping allows the teacher (1) to increase the pace and raise the level of instruction for high achievers, and (2) to provide more individual attention, repetition, and review for low achievers. The high achievers benefit from having to compete with one another, and the low achievers benefit from not having to compete with their more able peers.

One of the main arguments against ability grouping is that the practice creates classes or groups of low achievers who are deprived of the example and stimulation provided by high achievers. Labeling students according to ability and assigning them to low-achievement groups may also communicate self-fulfilling low expectations. Further, groups with low performance often receive a lower quality of instruction than other groups. Slavin sees as the most compelling argument against ability grouping its creation of academic elites, a practice which goes against democratic ideals.

## How Does Grouping Affect Student Achievement?

In his review, Slavin examines evidence on the achievement effects of five comprehensive ability grouping plans in elementary schools. His review draws conclusions about the effectiveness of the following grouping plans: ability grouped class assignment, regrouping for reading or mathematics, the Joplin Plan, nongraded plans, and within-class ability grouping.

Ability Grouped Class Assignment. This grouping plan places students in one self-contained class on the basis of ability or achievement. In some departmentalized upper elementary grades, the class may move as a whole from teacher to teacher. Evidence suggests that ability grouped class assignment does not enhance student achievement in the elementary school.

Regrouping for Reading and Mathematics. Under this plan, students are assigned to heterogeneous homeroom classes for most of the day, but are regrouped according to achievement level for one or more subjects. For example, all students from various homeroom classes of one grade level might be re-sorted into ability grouped classes for a period of reading instruction. Results indicate that regrouping for reading or mathematics can improve student achievement. However, the level and pace of instruction must be adapted to achievement level. Furthermore, students must not be regrouped for more than one or two subjects.

The Joplin Plan. This grouping plan assigns students to heterogeneous classes for most of the day but regroups them across grade levels for reading instruction. For example, a reading class at the fifth grade, first semester level might include high achieving fourth graders, average achieving fifth graders, and low achieving sixth graders. There is strong evidence that the Joplin Plan increases reading achievement.

Nongraded Plan. This plan includes a variety of related grouping plans that place students in flexible groups according to performance rather than age. Thus, grade-level designations are eliminated. The curriculum for each subject is divided into levels through which students progress at their own rates. Well-controlled studies conducted in regular schools generally support the use of comprehensive nongraded plans.

Within-class Ability Grouping. This plan is generally used for reading or mathematics. Teachers assign students within their classroom to one of a small number of groups based on ability level. These groups work on different materials at rates unique to their needs and abilities. Too few studies have been conducted on the use of within-class ability grouping in reading to support or challenge its effectiveness. Part of the problem is that within-class grouping is so widespread in reading instruction that it is difficult to conduct research that includes a control group not using the practice. Research on within-class ability grouping in mathematics clearly supports the practice, especially when only two or three groups are formed. The positive effects are slightly greater for low-achieving students than for average or high achievers.

### What Should Schools and Teachers Do About Ability Grouping?

Slavin concludes that schools and teachers should use the methods proved most effective, such as within-class ability grouping in mathematics, nongraded plans in reading, and the Joplin Plan. The review recommends that schools find alternatives to the use of ability grouped class assignment, such as assigning students to self-contained classes according to general ability or performance level.

Based on his examination of the features of successful and unsuccessful practices, Slavin recommends that the following elements be included in successful ability grouping plans:

- Students should identify primarily with a heterogeneous class. They should be regrouped by ability only when reducing heterogeneity is particularly important for learning, as is the case with math or reading instruction.
- Grouping plans should reduce student heterogeneity in the specific skill being taught, not in IQ or overall achievement level.
- Grouping plans should allow for frequent reassessment of student placement and for easy reassignment based on student progress.
- Teachers must vary the level and pace of instruction according to student levels of readiness and learning rates in regrouped classes.
- Only a small number of groups should be formed in within-class ability grouping. This will allow the teacher to provide adequate direct instruction for each group.

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# The Development of Social Competence in Children

**Sherri Oden**

Researchers have tried to pinpoint the origins of positive social adjustment in relation to genetic, familial, educational, and other factors. This paper reviews research on the development of social competence in infants and children, emphasizing the developmental processes which take place in the family, peer groups, preschool, and elementary school. Also discussed are difficulties in social development.

## Infants as Social Beings

Breakthroughs in methodology for assessing infants' perceptual abilities have shown that even newborns are quite perceptive, active, and responsive during physical and social interaction. The newborn infant will imitate people, stick out its tongue, flutter its eyelashes, and open and close its mouth in response to similar actions from an adult or older child. Through crying and other distress sounds, the infant signals physical needs for food, warmth, safety, touch, and comfort.

Infants' physical requirements are best met when delivered along with social contact and interaction. Babies who lack human interaction may "fail to thrive." Such infants will fail to gain sufficient weight and will become indifferent, listless, withdrawn and/or depressed, and in some cases will not survive (Clarke-Stewart & Koch, 1983).

Increasingly, an infant will engage in social exchanges by a "reciprocal matching" process in which both the infant and adult attempt to match or copy each other by approximation of each other's gaze, use of tongue, sounds, and smiles. Bruner (1978) and others have proposed that these social interaction processes also constitute a "fine tuning" system for language and cognitive development.

## Family Attachment Systems

It is important for infants to maintain close relationships with one or more adults. Typically, one adult is the mother, but others may be fathers, older siblings, or family friends. The smiling and laughing of an infant become responses to social stimulation and objects provided by specific persons (Goldbert, 1982). A growing "bonding" attachment, marked by strong mutual affect, with at least one particular adult, is critical to the child's welfare and social-emotional development.

Attachment, evident within six to nine months, becomes obvious when the infant shows distress when the mother (or other attachment figure) departs from a setting. Infants and toddlers who are "securely attached" are affectionate and tend not to cling to their mothers, but to explore the surrounding physical and social environments from this "secure base," showing interest in others and sharing their explorations with the mother by pointing and bringing objects of interest.

The socialization of the child is facilitated not only by the parents, but also within the family context, which may include relatives and friends who support the parents and children, and further reinforce cultural values. Studies by Baumrind (1973) and others have shown that, as children develop, parents use different methods of control or leadership styles in family management that fall into fairly predictable categories:

- authoritarian (high control)
- authoritative (authority through having knowledge and providing direction)
- permissive (low control or direction)
- combinations of the above

Some cultural groups tend to prefer one or the other of these styles, each of which encourages and controls different patterns of behavior in children. Mothers who are more verbal in their influence on children's actions have been found to use "benign" instructive direction that appears to result in the child having greater social competence at home, with peers, and in school settings.

## Peer Relationships

As a toddler, the child moves in peer contexts which provide opportunities for learning to sustain interaction and develop understanding of others. Piaget (1932) pointed to peer interaction as one major source of cognitive as well as social development, particularly for the development of role-taking and empathy. In the contexts of school, neighborhood, and home, children learn to discriminate among different types of peer relationships—best friends, social friends, activity partners, acquaintances, and strangers (Oden, 1987). Through engaging in peer relationships and social experiences, especially peer conflict, children acquire knowledge of the self versus other and a range of social interaction skills. Mixed-age peer interaction also contributes to the social-cognitive and language development of the younger child while enhancing the instructive abilities of the older child (Hartup, 1983).

Children's social-cognitive development, including moral judgment, appears to parallel cognitive development as children's perceptions of relationships, peers, and social situations become more abstract and less egocentric.

Preschoolers are less able to differentiate between best friends and friends than elementary school-age children. But young children can provide specific reasons why they do not like to interact with certain peers. From six to 14 years, children shift their views of friendship relationships from sharing of physical activities to sharing of materials, being kind or helpful, and, eventually, perceiving friendships that allow individuality to be expressed or supported (Berndt, 1981).

### Limiting Factors in Social Development

A child's connection with a given family, neighborhood, center, or school may limit opportunities for social development. Mixed age, sex, racial, or cultural peer interactions may be infrequent and highly bound by activity differences and early learned expectations, thereby limiting the extent of diversity in peer interaction. This lack of diversity limits the child's ability to be socially competent in various circumstances (Ramsey, 1986).

Formally structured educational situations, built around teacher-group interaction, tend to result in fewer peer interactions than occur in less formal settings. Fewer socially isolated children are found in informal classrooms where activities are built around projects in which peers can establish skills for collaboration and activity partnership (Hallinan, 1981).

The long term benefits of positive peer interactions and relationships have been shown in a number of studies (Oden, 1986). Greater social adjustment in high school and adulthood has been found for people who at 9 or 10 years of age were judged to be modestly to well accepted by peers. Poor peer acceptance results in fewer peer experiences, few of which are positive, thus creating a vicious cycle of peer rejection.

Various instructional approaches and experiences related to social skills development have proved effective in increasing children's social competence. Coaching, modeling, reinforcement, and peer pairing are methods based on the same learning processes evident in early adult-child relations. With these methods, social-cognitive and behavioral skills can be developed which can provide poorly accepted peers with the ability to break the cycle of peer rejection. Children appear to learn how to more competently assess peer norms, values, and expectations and select actions that may bring them within the "threshold of peer acceptance" (Oden, 1987).

Societal factors also affect children's social development. Stressed families and those with little time for interaction with children have become a focus of research as divorce rates have risen. Poverty conditions undermine opportunities for children's positive development. Further investigation is needed on the linkage between child development and social factors.

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ERIC Digest

# Early Childhood Classrooms and Computers: Programs with Promise

### James L. Hoot and Michele Kimler

This digest discusses two promising computer programs for early childhood classrooms. These programs—word processing and Logo—are beginning to show benefits as learning tools. The role of the teacher as an essential element in the success of these programs is also explored.

During the 1980s, computers achieved widespread use in classrooms for young children. As we approach the 1990s, teachers are coming to realize that the mere presence of these computers does not assure student learning. Unsupported claims of early computer zealots are now giving way to a developing body of research which can assist early childhood educators in making justifiable use of these technological tools in early childhood curricula. The digest which follows discusses two uses of computers that, based upon recent research, appear especially productive as learning tools in classrooms—word processing and Logo programming.

## Word Processing

Those who work with very young children are aware that children are generally quite effective in making themselves understood. Their language is very much alive, fresh, creative, and often unpredictable. While children's verbal language possesses tremendous potential for communicative competence, because of their lack of motor facility they have less potential for achieving equal competence in written communication.

Over the past five years, word processors specifically designed for children who are just beginning to use print have been developed. Experts are finding that these programs can support beginning writers in many ways; for example, word processing:

- Provides visual, motor, and sometimes auditory, supports for unsophisticated learners.
- Often encourages learners to write more since the mechanical drudgery traditionally associated with writing is minimized.
- Encourages writers to focus on the content of what is said rather than the form or technical aspects of writing.
- Increases the likelihood that children will revise text—a key process in effective writing.
- Provides products that are printed with a letter-quality appearance that encourages children to share written communication (e.g. stories for the library, signs, banners, books).
- Involves writing on a computer screen which is visible to passerbys. This public nature of word processing encourages social interaction in writing.
- Makes writing especially appealing to limited English proficient and special needs children.
- Encourages positive attitudes toward learning in many curricular areas.

## Recent and Near-Future Developments

Over the past couple of years, word processors which "speak" text created by children have become available. Initial research suggests these devices are highly motivational and promote improved understanding of the relationships of letter and sound, and of word and sentence. In addition to "talking" word processors, programs are under development and will soon be available which create written text directly from spoken words. Thus, the richness of children's language may be captured without the necessity of typing text.

## Logo and the Classroom

Logo is a highly sophisticated graphics-oriented programming language developed specifically for children. Logo, which was introduced into classrooms about seven years ago, is specially designed to enable children to become active participants in learning. To date, researchers believe that:

- Logo programming develops problem-solving abilities. More specifically, such programming develops procedural problem-solving skills in which larger problems are broken down into smaller, more manageable chunks.

- —Logo facilitates assimilation of basic geometric and mathematical concepts. Some researchers have even indicated success in using Logo to introduce concepts often considered too difficult for primary children.
- —Children collaborate more when working on computer problems than when working on other classroom tasks.
- —Learning how to plan well is not intrinsically guaranteed by the Logo programming environment, and such learning must be supported by teachers who know how to foster the development of planning skills.
- —Logo may enhance social development of children. The Logo environment may encourage children to learn to cooperate, listen, and be critical in a constructive fashion, and to appreciate the work of others.
- —Children who are working with Logo, engage in more self-directed explorations, exhibit more pleasure at discovery, use verbal and other types of problem solving strategies more often, and make greater improvement in attitudes to learning than do children who do not use Logo.
- —Logo provides an environment which encourages divergent thinking and creativity.
- —Students using Logo tend to improve in overall cognitive, social, and behavior skills.
- —Logo promotes development of the ability to describe directions (spatial relation development).
- —Logo is especially effective in motivating children with special needs.

### Word Processing, Logo, and Classroom Teachers

Current literature tends to demonstrate consistency concerning the importance of the classroom teacher. The teacher has been found to be the single most influential determinant of success in creating problem-solvers through the use of Logo or improving the written communicative competence of children with word processing. Effective teachers have an understanding of both the power and limitations of these programs for children. Moreover, these teachers are well-grounded in knowledge of the cognitive processes being developed and of child development.

### Conclusion

In the next decade, the use of computers as a learning tool will become even more prevalent. It will be necessary, therefore, for educators to become increasingly aware of what computers can and cannot do for the educational development of children. In this digest we have summarized developing research which, though it is far from definitive, is beginning to confirm the merits of using word processing and Logo in the early childhood curriculum.

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ERIC Digest

# Hothousing Young Children: Implications for Early Childhood Policy and Practice

Tynette W. Hills

Young children are presently being subjected to accelerating standards for achievement. Their teachers are under pressure from parents and administrators to alter curriculum and instruction accordingly. This digest discusses the conflicts early childhood educators are experiencing and offers recommendations for action.

Recent proposals for educational reform have emphasized academic achievement and preparation for technological change. As a result, many parents and administrators are raising achievement standards for young children. Teachers are being pressured to alter curriculum and instruction, and young children are being hurried and "hothoused"—caused to acquire knowledge and skills earlier than is typical (Sigel, 1987). This digest discusses the effects of hothousing on early childhood programs, the conflicts early childhood educators experience regarding hothousing, and actions they can take to improve the situation.

### Higher Standards for Young Children

The current pressure for young children to achieve comes from several sources. Parents pressure children for various reasons:

- their own ambitions for achievement;
- their own need for help with multiple responsibilities, especially if they are single;
- anxiety about the uncertain, highly competitive futures children face.

There have also been broad changes in social values. Heightened expectations for young children may signal a change in the nation's view of children. For example, Americans may no longer see childhood as a unique period of development, requiring special nurturance (Winn, 1981); adult interests may have become paramount (Douvan, 1985).

### Educational Reform

According to Katz (1987), when educational reform is applied to primary school and downward, the results are:

- acceleration of formal academic instruction, for example, earlier introduction to reading and math, complete with texts and workbooks;
- entry and placement tests for kindergarten and first grade;
- standardized or other tests for promotion to first grade;
- transitional or extra-year programs for children who cannot keep up.

Affluent children may receive an excess of "enrichment," such as special tutoring in the arts, and fast-paced educational programs. They may have to answer to high expectations for skills and knowledge. Children in low-income families also face more stringent standards in school and at the same time may have added family and community responsibilities. Such pressures may be harmful to the mental and physical welfare of children (Elkind, 1986) and deny them more fitting pursuits.

### Impact on Early Childhood Educators

Those who advocate hothousing programs pay too little attention to theory and research. Complex developmental processes underlie concepts and skills used in primary and elementary education. Children must actively organize their knowledge, apply it to new events, and relate ideas about time, space, number, and persons. Accelerating young children forces them to rely on lower-level cognitive processes, for example, memorization and visual recognition of letters and numbers. This may stultify learning and damage self-esteem and confidence (Elkind, 1986; Sigel, 1987). Children must have time and suitable social and educational experiences to develop normally. It is short-sighted to trade human complexity and creativity for accelerated academic learning in early childhood (Minuchin, 1987). To do so is counterproductive for long-range educational goals.

Early childhood educators place high value on collaboration with parents. Thus it is especially distressing that much of the hothousing pressure comes from parents. Conflicts with parents over aspirations for children and expectations for programs threaten a traditional source of teachers' support. If children sense lack of agreement, their confidence in significant adults may be undermined.

Early childhood educators are particularly vulnerable to criticism. Society places a low value on their work. Other professionals lack understanding of what they do. Educators' programs are subject to administrative and parental interference. Educators tend to be isolated from one another and hampered in developing professional consensus on policy and practice. These circumstances weaken the professional influence of teachers and reduce their ability to resist pressures that may be harmful to children and to defend appropriate programs.

## What Teachers Can Do

The widespread emphasis on accelerated achievement for young children, and the simultaneous devaluation of children's personal and social development, present teachers with urgent responsibilities. Early childhood educators must renew their dedication to sound practice and increase their sensitivity to social and economic forces (Hills, 1987). They should work to:

–*Build respect for the unique needs of young children.* Young children need protection and nurturance during a prolonged period of development.

–*Promote the best interests of all young children.* While some young children face demands for accelerated achievement, others face early semi-adult responsibility due to the absence of family or community support. Systems of child care and early education in our country must respond to the developmental needs of all young children (National Association for the Education of Young Children, 1986).

–*Gain support from other child development and early childhood professionals.* Early childhood educators should conceptualize their work as part of a comprehensive system of care-giving and education that provides support for growth-enhancing environments.

–*Enlist parents in promoting appropriate programs.* Teachers must take special pains to work closely with parents, and to emphasize the importance of experiential learning, play and social experience while doing so. In close cooperation, parents and teachers are more likely to provide what children need for optimum development and learning.

–*Gain a voice in decisions about curriculum and instruction.* Early childhood educators are equipped by training and experience to recommend the most appropriate educational experiences. They must participate in making decisions about educational programs, balancing broad traditional goals of comprehensive child development with emerging needs. They must also articulate to parents and others the place of early education in the long process of children's growth.

## Conclusions

To prevent inappropriate practices and advocate for appropriate practices, teachers should:

–be aware of reasons why parents and administrators urge acceleration;

–become effective spokespersons for sound policies and practices;

–ally themselves with other parents, teachers, and administrators who are committed to practices that best serve the long-term interests of children.

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ERIC Digest

# Latchkey Children

## Ellen B. Gray

### The Number of "Latchkey Children"

The majority of children in this country are now growing up in families in which both parents or the only parent works outside of the home. It has become commonplace in our society for children to take care of themselves for periods of time every day. Just how common this phenomenon is is a matter of some dispute. While recent census data suggest that only 7.2 percent of children between the ages of 5 and 13—about two million—spend time in self-care, many experts estimate that over a quarter of the children who are between 6 and 14 years old spend time caring for themselves, most of them regularly.

### Effects of Self-care on Children

Not much is known about the adequacy or effects of these self-care arrangements. Experts are just beginning to question the results of children being left alone or in the care of an older sibling on a regular basis. Their conclusions vary. Some are sanguine about the effect on children's development:

—Galambos and Garbarino (1983) found no difference in academic achievement or school adjustment between small-town fifth and seventh graders in self-care and their adult-supervised peers.

—Rodman, Pratto, and Nelson (1985) found no difference in self-esteem, social skills, or sense of control over their own lives between fourth grade children in self-care and fourth graders supervised by parents.

—Hedlin and her colleagues (1986) studied 1200 children in kindergarten through eighth grade, and found that 80% of the children in self-care said that they loved it or usually liked it.

—Vandell's study of 349 Dallas third graders (1986) showed no differences in parents', peers' or childrens' ratings of the social and study skills of those who went home to their mothers as opposed to those in latchkey situations.

Other studies have reached very different conclusions, however:

—Woods (1972) reported that the low-income urban fifth graders in self-care whom she studied had more academic and social problems than those in traditional after-school arrangements.

—Steinberg's study (1986) of fifth, sixth, eighth, and ninth graders showed that the more removed from adult supervision adolescents are, the more they are susceptible to peer pressure to commit antisocial acts.

—Thomas Long (in press) found that as children spend more time unattended in their homes, the incidence of experimentation with alcohol and sex increases.

It should be noted that these studies dealt with different age groups, community characteristics, and outcome measures, and therefore are not strictly comparable. They also do not deal with a question many people have about the effect of self-care on children: What is the emotional impact?

### Preparatory Programs for Self-care

A number of educational curricula have been developed to prepare children to care for themselves. These programs provide information, develop skills, and encourage communication within families about child self-care. Most are targeted to children who already spend time alone, but at least one ("I'm in Charge") facilitates decision-making about whether to place a particular child in self-care. Seventeen of these programs and books are listed in a booklet published by the National Committee for Prevention of Child Abuse (1986) cited below in the For More Information section.

### Effectiveness of Programs for Latchkey Children

Until recently, almost nothing was known about the effectiveness of programs designed to prepare children for self-care. One of the few evaluations of a program for teaching self-care skills which has been reported in the literature suggests the value of a specific kind of training program. Jones and Haney (1984) found that six 40-minute sessions brought the fire safety skills mastery level of 7 to 10-year-old children from almost nothing to nearly 100 percent. Gray (in review) found that a program designed to prepare latchkey children for self-care increased parent-child communication and agreement about safety and other self-care issues. The program also increased the children's confidence, but their loneliness persisted.

### Alternatives to Self-care

Some families do not have to place their children in self-care but choose to do so anyway for any of a number of reasons. But for other families, self-care is the only recourse. Single parents who cannot afford supervised care, or who live in communities where supervised care is not available, must leave their children alone. Concern about this situation has stimulated action on many fronts. The Dependent Care Grants Program of the federal government, currently authorized for fiscal years 1987 through 1990 at $20 million per year, is a block grant for school-age child care and dependent care information and referral. Sixty percent of the funds from these grants—which were granted in 1986 to every state but South Dakota (which didn't apply)—is slated to go to program development, and 40% to information and referral.

Concern has prompted action on the state level as well. New York, for example, passed legislation to make $300,000 available to its communities to stimulate the development of new programs that provide care and supervision for school-age children.

The greatest effort in this area is being expended in local communities, however. Nonprofit agencies and local corporations are starting to provide after-school care, and some community hospitals even provide sick child day care.

### Summary

It is clear that many children are currently in self-care. The exact number is not known, perhaps in part because this is such an emotional issue for some family members that they cannot be completely candid about it. Self-care is necessary at this point in our history because our social institutions have not kept pace with the "feminization of the workforce," but there is nevertheless much concern about whether self-care is good for children. Research on this issue is inconclusive. Among other things, this concern has prompted development of curricula for latchkey children. Although there is little research on the effectiveness of these programs, there is some suggestion that they do a better job of imparting information than dealing with feelings. All levels of the government and the private sector are responding to the need for school-age child care, but this response is slow and, as yet, inadequate. The issue of latchkey children is a sensitive one, and promises to be so for some time to come.

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ERIC Digest

# Quality or Affordability: Trade-Offs for Early Childhood Programs?

## Barbara Willer

The demand for early childhood services in this country has never been greater. This unprecedented demand is stretching the levels of program quality to the limit. In fact, we are facing a crisis in child care. Many programs are unable to recruit and retain qualified staff due to inadequate wages and difficult working conditions. Affordability continues to be a major issue for many families.

Child care and early education issues are gaining increasing media attention, as evidenced by recent stories in *Newsweek, Time, USA Today, The New York Times,* and *The Wall Street Journal.* Numerous child care bills have been introduced in Congress, and state legislatures and local municipalities continue to discuss the child care issue.

Unfortunately, many of those who have "discovered" the crisis in child care focus on only one facet of the problem: the need for affordable programs. The fact is that solutions to the crisis must, in addition to insuring affordability, assure (1) the quality of programs, (2) adequate compensation for teachers, and (3) availability to all families.

There are those who assume that assuring affordable programs is the primary concern. Some suggest that licensing provisions should be relaxed. They feel that strict standards keep potential providers from offering services and thus exacerbate problems in program availability. Those who focus strictly on affordability assume that program quality will improve as parents purchase the level of quality they desire. This reasoning is based on several faulty assumptions:

- That families have unlimited income to spend on child care,
- That parents fully appreciate the long-term implications of lack of quality and have the resources to act on this recognition,
- That parents can adequately monitor programs without outside assistance,
- That licensing standards are not important for safeguarding children in care settings.

### Paying for Child Care

Most parents want to ensure that their children have good early child care, but many are unable to afford the cost. A recent survey of 600 American families revealed that nearly 40% of the respondents felt that they could not afford their current child care arrangement or the arrangement they would prefer (American Federation, 1987). States are also finding it difficult to fund adequate child care. Fewer than 10% of the 1.1 million eligible California children who are 14 or younger can be served at the state's current level of child care funding (Blank, 1987). Family incomes cannot support the current delivery system, let alone provide the resources needed to improve the quality of services. Relying on family income to stimulate improvements in program quality will serve only families which can afford to pay for a quality program. Such an approach unfairly limits participation in good programs to affluent families.

Provision of subsidies to families to allow them full access to quality programs would require a massive infusion of resources, on a sliding-scale basis, into the child care system. It is unlikely that sufficient funds can be funneled to programs through parent subsidy. Too many parents already face competing demands for their limited budgets.

### A Problem of Program Quality

Across the country the quality of early childhood programs is being affected by serious problems in recruiting and retaining qualified staff. For years, staff have subsidized early childhood programs by accepting compensation far below the value of their work. Many early childhood practitioners receive income below the poverty level. A new survey by the National Committee on Pay Equity (1987) found that child care is the second most underpaid profession. Turnover rates among child care workers are among the highest for any industry. When an early childhood staff member leaves, it may take months to find a qualified person to fill the vacancy.

To fight turnover, programs must be able to offer substantial increases in wages and benefits. Even if unlimited funds were provided, quality programs would not be guaranteed. That there is little public understanding of the importance of early childhood care and the characteristics of quality programs for young children is apparent in the low status and compensation accorded those who teach and care for young children. This general lack of understanding is exacerbated by the fact that deleterious effects of low quality programs may not be immediately apparent, but rather constitute missed opportunities with potentially negative long-term effects.

### Parents Alone Cannot Monitor Program Quality

When a family eats at a fast food restaurant, the parents do not walk through the kitchen to judge its cleanliness. Public licensing and inspection processes help to ensure that consumers find acceptable quality. Licensing of early childhood programs serves the same purpose. Licensing standards set forth the public definition of acceptable program quality for children. Differences in standards from state to state reflect differences in public understanding of and support for needed provisions. Parents play an important role in monitoring the licensing process, but ultimately the state sets minimum levels of acceptability.

Does licensing hinder program availability? Licensing standards help to keep out unscrupulous or unqualified providers. More importantly, an effective licensing system helps providers in locating information and technical assistance, recruiting children, and getting insurance. Thus, an effective licensing system actually supports the provision of early childhood programs. Easing licensing provisions, or deregulating care by making registration for family day care providers voluntary, negates the public value of this service. Further, easing standards may compromise the safety of children if necessary safeguards are not required.

### Addressing the Crisis

The provision of quality early childhood programs benefits all segments of society. Parents benefit from knowing their children are getting the best possible start in life. Employers benefit because parents' productivity is not impaired by unstable arrangements. Despite benefits to all, the costs of providing quality early childhood services have been borne largely by parents and the subsidies of early childhood staff. Creative approaches are needed to encourage all segments of society to take a more active role in supporting quality programs. Many such strategies are described in the NAEYC publication *The Growing Crisis in Child Care: Quality, Compensation, and Affordability in Early Childhood Programs.*

Groups and individuals can also work to ensure the passage of new federal legislation proposed by the Alliance for Better Child Care (ABC). A major portion of the funds in the ABC legislation is targeted to help families deal with the problems of affordability on a sliding scale basis. But the ABC effort also seeks to improve the total child care system by (1) improving access to quality programs, (2) strengthening state standards and their implementation, (3) improving family day care as well as child care centers, (4) supporting parental involvement, (5) advocating training programs to ensure qualified staff, (6) encouraging coordination among state and local agencies that affect young children and their families, and (7) providing additional funds to serve more children, assure quality, and improve compensation of staff. (To find out more about the Alliance for Better Child Care, contact The Children's Defense Fund, 122 C. Street NW, Washington, DC 20001.)

An integrated approach is essential to dealing with the crisis of child care. There can be no trade-offs between quality and affordability. We can make a significant investment in the future of our nation when we support the provision of high quality early childhood programs to all families who want their services.

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ERIC Digest

# Readiness for Kindergarten

### Joanne R. Nurss

What social, language, perceptual, and motor skills do 5–year–olds need to be ready for kindergarten? What effect does the kindergarten curriculum have on a child's readiness? Is chronological age a factor? What is expected by the end of kindergarten?

**Introduction**

Readiness is a term used to describe preparation for what comes next: readiness for kindergarten involves both the child and the instructional situation. Any consideration of the preparation a child needs to be successful in kindergarten must take into account the kindergarten program and the teacher's expectations of the child.

**Social and Behavioral Expectations**

Kindergarten teachers expect that children will be able to function within a cooperative learning environment in which the child works both independently and in small and large groups. Children are expected to be able to attend to and finish a task, listen to a story in a group, follow two or three oral directions, take turns and share, and care for their belongings. They are also expected to follow rules, respect the property of others, and work within the time and space constraints of the school program. It is important that children learn to distinguish between work and play, knowing when and where each is appropriate within the definition of each (Bradley, 1984; LeCompte, 1980).

**Sensory-Motor Expectations**

Teachers expect children to develop certain physical skills before they enter kindergarten. Children are expected to have mastered many large muscle skills, such as walking, running, and climbing, and fine motor skills requiring eye–hand coordination, such as use of a pencil, crayons, or scissors. Fine motor skills are used when the child begins to write its name and to make attempts at written expression. It is assumed that children have acquired both visual and auditory discrimination of objects and sounds. Such discrimination skills will be used to learn the names and sounds of letters and the names and quantities of numerals. Children are expected to have developed the concepts of same and different, so that they can sort objects into groups whose members are alike in some way. Usually the kindergarten teacher expects the children to recognize and name colors, shapes, sizes, and their own names (even though these concepts are often part of the curriculum early in the school year).

**Cognitive and Language Expectations**

Most five–year–olds can express themselves fluently with a variety of words and can understand an even larger variety of words used in conversations and stories. If children have been exposed to books and heard stories read and told, they have begun to develop an interest in what print says and how it is used to express ideas; a concept of story and story structure; and an understanding of the relationship between oral and written language.

**Chronological Age**

Many school systems and states have raised the entrance age for kindergarten in hopes that the older age of the class will increase the likelihood of the children's success. However, research does not support this action. Most studies show that chronological age alone is not a factor in kindergarten success (Meisels, 1987; Wood, 1984).

**Kindergarten Curriculum**

Many children now have a prior group experience in nursery school, prekindergarten, or day care. In the past, when kindergarten was the child's initial school experience, its focus was on the child's social adjustment to school. Kindergarten was usually a half–day program whose curriculum and activities were separate from the rest of the school, and whose purpose was to prepare the child for first grade. Now kindergarten is an integral part of the elementary school's curriculum, and the focus has shifted from social to cognitive or academic (Nurss and Hodges, 1982). Many states fund full–day kindergarten programs on the assumption that 5–year–olds can benefit from a longer school experience. Kindergartners vary in the degree to which their cognitive skills are strengthened through a developmentally oriented program with language-based, concrete activities. In many kindergartens, language, cognitive, sensory-motor, and social-emotional skills are addressed through play. Small group instruction, learning centers, and whole group language activities are used as systematic, planned opportunities for children to develop in all areas.

In some cases, however, the kindergarten uses structured, whole group, paper-and-pencil activities oriented to academic subjects, such as reading and mathematics. The curriculum in these kindergartens often constitutes a downward extension of the primary grade curriculum and may call for the use of workbooks which are part of a primary level textbook series. Many early childhood professionals have spoken out on the inappropriateness of such a curriculum and have urged widespread adoption of a developmentally appropriate curriculum (Bredekamp, 1986).

The question of readiness for kindergarten depends in part on which type of program the child enters. Different approaches to reading and writing, for example, make different demands on a young child. A child may be ready for one type of instructional program, but not another.

A further issue is that of the expectations of the teachers and school system for what the child will accomplish by the end of kindergarten. As expectations become more academic and assessments more formal (for example, standardized tests that compare children to a national sample of kindergarten children) pressure increases to retain children who do not meet expectations or to place them in a transition class between kindergarten and first grade. The assumption is that children who have not achieved a minimum level of cognitive and academic skills prior to first grade will benefit from another year of kindergarten. While that may be true for some, it is not true for many others (Shepard, 1987). Developmentally appropriate programs assume that children vary upon entrance; that all children progress during the program at their own rate and in their own manner; and that children will continue to vary at the end of the program.

## Conclusion

Readiness for kindergarten depends on a child's development of social, perceptual, motor, and language skills expected by the teacher. It also depends on the curriculum's degree of structure, the behavior required by the instructional program, and expectations of what is to be achieved by the end of the program.

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ERIC Digest

# SCREENING FOR SCHOOL ENTRY

Tynette Wilson Hills

Screening programs for children entering school are used to predict which pupils are likely to have problems in regular classrooms and to identify those who may be eligible for particular programs, such as special education. Screening practices vary greatly from state to state, according to a national survey (Gracey and others, 1984), and their use is increasing. This digest discusses issues related to screening and screening procedures.

### The Purpose of Screening

The terms "screening" and "assessment" are not interchangeable. Screening is a preliminary process for identifying children who may be at risk of future difficulty in school (e.g., inability to meet academic expectations) and those who may have special needs in learning (e.g., extraordinary abilities and talents or handicapping conditions). In both cases, the identified children must be assessed more carefully to evaluate whether they do indeed require adaptations of the regular instructional program, or qualify for specialized educational placement. Because screening is intended for all the children, the measures should be inexpensive, brief, simple to administer, and easy to interpret. Screening tools require lower predictive power than diagnostic measures. Thus, screening alone is not sufficient for decisions about a child's placement or kind of instruction. Further assessment is necessary. (Meisels and others, 1984).

### Eligibility for School Entry

Many schools now screen age-eligible children to determine school readiness, even though educators disagree about what determines a child's chances of success in school. One reason for this trend is that escalating standards in the early grades have altered curriculum, causing more entering children to be at risk of failure.

School entry is usually based upon birth date. When chronological age is the criterion, the 12-month age range, and individual differences in development and experience almost always result in a heterogeneous group. Schools have tried several measures to cope with that variation (Uphoff and Gilmore, 1985), including delayed entry for the youngest children, slower-paced classes for immature children, and transitional classes for some children. Screening is often used to find those children who, after further assessment, seem to be good candidates for one of these options.

Keeping children in the regular program may be more beneficial in the long run and can further equal educational opportunity (Laosa, 1977; May and Welch, 1986). Controlled studies of children held back and those in regular programs do not show significant advantages for holding back (Shepard and Smith, 1985). Screening and assessment can be used to identify children who may need more individual help or smaller classes to remain with their peers.

### Issues in Screening

The underlying question about screening at school entry is whether young children's behavior should be measured. Is screening harmful? Is it valid? Goodwin and Driscoll (1980) claim that charges of harm are not substantiated. Instead, the issues are what, how, when, and why.

What should screening measure or observe? Two basic kinds of tests are associated with screening and assessment of children entering school: school readiness tests and developmental screening tests (Meisels, 1986). Readiness tests yield information about the extent to which a child has acquired the knowledge and skills considered to be important entry criteria for a particular program. Developmental screening tests provide information about a child's performance in broad areas of normal development and potential to acquire further knowledge and skills. Both kinds of information are important, but one kind of measure cannot be substituted for the other.

How should children's abilities be measured? Tapping broad developmental areas—language, intellectual and perceptual functioning, and motor coordination—will help to assure validity. Screening should also include the social-emotional domain, since children with early behavioral problems often have problems later in school (Gracey and others, 1984).

Screening procedures should sample what children know and can do in situations in which they are comfortable. Young children's behavior is affected by unfamiliar situations. If children have difficulty responding (e.g., using pencils to write or mark on forms), they may not be able to demonstrate their actual abilities.

Information from multiple sources—parents, teachers, and others, using informal tools to augment any tests and checklists—will present a more adequate picture of a child's current functioning.

Educators who select screening instruments should insist upon accepted standards (Meisels and others, 1984):

- Were norm-referenced measures developed on a population including children like the ones to be screened?
- Are the measures valid and reliable?
- Are they sensitive, correctly identifying children possibly at risk?
- Are they specific, correctly excluding others from further assessment?

When should children be screened? Young children change rapidly, especially in social-emotional development (Gallerani and others, 1982). Individual growth factors may cause problems to appear later or early problems may be overcome with further development and learning. Therefore, further screening should be done periodically.

How should screening information be used? Problematic children should be assessed diagnostically and results used to guide decisions about the programs children need. Otherwise, children may be:

- unfairly excluded from needed services or placed inappropriately
- kept in a program that no longer meets their needs
- subjected to lowered teacher expectations, diluted curriculum or narrow homogeneous groupings, constricting their opportunities to learn (Gredler, 1984).

## Conclusions

Screening to identify children who may be prone to academic problems or eligible for specialized educational services is now prevalent at school entry and likely to continue. To insure that all such children are correctly identified, subsequently assessed, and ultimately offered appropriate education, educators should:

- clarify the purpose of screening for teacher, parents, administrators, and any others involved
- keep informed about research concerning screening tools and their usefulness
- adopt procedures that screen for current levels of functioning in a broad range of domains
- rescreen periodically and assess diagnostically to confirm children's needs
- keep standards for curricula and instruction appropriate for the vast majority of eligible children, customizing learning activities for individuals.

Screening programs should be used to identify those children who may need special kinds of help to function well in school, not to exclude them from programs for which they are legally eligible. Sound, ethical practice is to accept children in all their variety, identify any special needs they have, and offer them the best possible opportunity to grow and learn.

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ERIC Digest

# The Shifting Kindergarten Curriculum

### Harriet A. Egertson

This digest reviews factors influencing kindergarten curriculum, and contrasts characteristics of skill-based and developmentally oriented programs.

## Current Influences on the Curriculum

Few would argue that what is now taught and expected to be learned in many kindergartens is profoundly different from what it was two decades ago. The shift from play- and group adjustment-oriented settings to kindergarten classrooms characterized by direct teaching of discrete skills and specific expectations for achievement is being reinforced by recent calls for reform of public education (Elkind, 1986).

Critics of the trend toward skill-based kindergartens are not advocating a return to outmoded educational practices of the past. However, much new research about children's learning confirms some historical beliefs about effective educational practices. Unfortunately, this well-known and respected body of research information is often ignored in the formulation of curriculum for today's kindergarten (Spodek, 1986).

Most children entering kindergarten today have much wider experience outside the home than children of the past. As a result, many teachers, administrators, and parents believe that more advanced content is necessary. Others are concerned that younger five-year-olds may find it difficult to be successful if the kindergarten curriculum is too advanced. Some parents delay their child's entrance to kindergarten for a year to give the child the advantage of being the oldest in the class.

Many preschools and child care centers try to teach content identified by kindergarten teachers as prerequisite to kindergarten success. It is not uncommon now to find child care and preschool settings in which children spend prolonged periods sitting at tables trying to complete pencil and paper tasks which would be inappropriate even for substantially older children. Parents often shop for the program that promises the most in terms of promoting kindergarten readiness.

These practices have led to the widespread use of screening and readiness tests prior to kindergarten entrance to determine whether children are likely to be successful in school (Egertson, 1987). There is wide agreement, however, that such measures are often poorly constructed, inappropriately used, and likely to screen out those children most likely to benefit (NAECS/SDE, 1987).

A rigid lock-step curriculum is less responsive than others to the new wider age and ability-ranged groups. Hence, schools have increasingly resorted to retention and extra-year programs for children who have difficulty with the expectations of regular kindergarten. Transition placements usually occur either the year before or the year after kindergarten. However well-intentioned those who organize these classes may be, "transition class" is simply a more palatable term for "retention."

Since teachers tend to direct instruction to older and more able children, more of the younger children tend to be held out or placed in extra-year classes. As a result, curricular expectations tend to be raised. Research provides little evidence that children placed in transition classes achieve any more than their non-retained or nontransitioned counterparts in either cognitive or social-emotional domains (Smith and Shepard, 1987).

## Contrasts in Kindergarten Practice

It is common to hear the curricular polarity in kindergarten described as "academic" versus "child-centered." Unfortunately, neither term is explicit and use of the terms without sufficient elaboration often contributes to further lack of understanding and defensiveness.

An "academic" kindergarten is usually characterized by the direct teaching of specific discrete skills, particularly in reading and math, which children are expected to master before going to first grade. The daily schedule is usually broken into many small segments, often because it is believed that children do not have a sufficient attention span to enable them to work longer at a task. The majority of the instructional materials used in these classes are the kindergarten level of major series in reading and math. Often teachers use additional workbooks for phonics.

If interest centers are used, they are designed primarily to teach specific skills. Time for active exploration in the arts, science, or social studies is limited. Other common characteristics of skill-based programs include: (1) limited availability of, or independent use of, concrete materials; (2) much pencil-and-paper-oriented independent work; (3) little opportunity for conversation among children and between children and adults.

Kindergarten programs derived from a child development orientation may exhibit some of the characteristics of skill-based kindergartens. They are, however, driven by an entirely different philosophical viewpoint. The child-centered kindergarten does not base activities on the learning of discrete skills, but rather follows the mission of moving each child as far forward in his or her development as possible. Goals emphasize maintenance and development of dispositions to go on learning (Katz and others, 1987).

The child-centered kindergarten offers experiences to children in a physical setting which has been carefully designed to increase the likelihood that these experiences will occur. Linguistic competence is a primary goal, and language experiences appropriate for each child's stage of literacy development underlie the entire curriculum. Conversations among children and between children and adults are viewed as important to the development of linguistic competence. Independence and responsibility are promoted by child-initiated activities and expanded blocks of time which allow children to finish projects. Materials are logically organized, usually into several interest areas containing many options from which children self-select activities. The complexity of the materials ranges from easy to difficult, so that a wide range of abilities is accommodated.

## Conclusion

The forces which have led to the development of skill-based programs are reactive and largely ignore the early childhood research base. Redefinition of the kindergarten-primary curriculum from a developmental perspective is more beneficial for children than the use of retention and extra-year placement. Advocates of developmental kindergarten programs should emphasize the effectiveness of an active learning setting for advancing children's growth and development.

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**ERIC Digest**

# The Shy Child

## Marion C. Hyson and Karen Van Trieste

Shyness is a common but little understood emotion. Everyone has felt ambivalent or self-conscious in new social situations. However, at times shyness may interfere with optimal social development and restrict children's learning. This digest (1) describes types and manifestations of shyness, (2) reviews research on genetic, temperamental, and environmental influences on shyness, (3) distinguishes between normal and problematic shyness, and (4) suggests ways to help the shy child.

### What Is Shyness?

The basic feeling of shyness is universal, and may have evolved as an adaptive mechanism used to help individuals cope with novel social stimuli. Shyness is felt as a mix of emotions, including fear and interest, tension and pleasantness. Increases in heart rate and blood pressure may occur. An observer recognizes shyness by an averted, downward gaze and physical and verbal reticence. The shy person's speech is often soft, tremulous, or hesitant. Younger children may suck their thumbs; some act coy, alternately smiling and pulling away (Izard and Hyson, 1986).

Shyness is distinguishable from two related behavior patterns: wariness and social disengagement. Infant wariness of strangers lacks the ambivalent approach/avoidance quality that characterizes shyness. Some older children may prefer solitary play and appear to have low needs for social interaction, but experience none of the tension of the genuinely shy child.

Children may be vulnerable to shyness at particular developmental points. Fearful shyness in response to new adults emerges in infancy. Cognitive advances in self-awareness bring greater social sensitivity in the second year. Self-conscious shyness—the possibility of embarrassment—appears at 4 or 5. Early adolescence ushers in a peak of self-consciousness (Buss, 1986).

### What Situations Make Children Feel Shy?

New social encounters are the most frequent causes of shyness, especially if the shy person feels herself to be the focus of attention. An "epidemic of shyness" (Zimbardo and Radl, 1981) has been attributed to the rapidly changing social environment and competitive pressures of school and work with which 1980s children and adults must cope. Adults who constantly call attention to what others think of the child, or who allow the child little autonomy, may encourage feelings of shyness.

### Why Are Some Children More Shy Than Others?

Some children are dispositionally shy: they are more likely than other children to react to new social situations with shy behavior. Even these children, however, may show shyness only in certain kinds of social encounters. Researchers have implicated both nurture and nature in these individual differences.

Some aspects of shyness are learned. Children's cultural background and family environment offer models of social behavior. Chinese children in day care have been found to be more socially reticent than Caucasians, and Swedish children report more social discomfort than Americans. Some parents, by labeling their children as shy, appear to encourage a self-fulfilling prophecy. Adults may cajole coyly shy children into social interaction, thus reinforcing shy behavior (Zimbardo and Radl, 1981).

There is growing evidence of a hereditary or temperamental basis for some variations of dispositional shyness. In fact, heredity may play a larger part in shyness than in any other personality trait (Daniels and Plomin, 1985). Adoption studies can predict shyness in adopted children from the biological mother's sociability. Extremely inhibited children show physiological differences from uninhibited children, including higher and more stable heart rates. From ages 2 to 5, the most inhibited children continue to show reticent behavior with new peers and adults (Reznick and others, 1986). Patterns of social passivity or inhibition are remarkably consistent in longitudinal studies of personality development.

Despite this evidence, most researchers emphasize that genetic influences probably account for only a small proportion of self-labeled shyness. Even hereditary predispositions can be modified. Adopted children do acquire some of the adoptive parents' social styles (Daniels and Plomin, 1985), and extremely inhibited toddlers sometimes become more socially comfortable through their parents' efforts (Reznick and others, 1986).

### When Is Shyness a Problem?

Shyness can be a normal, adaptive response to potentially overwhelming social experience. By being somewhat shy, children can withdraw temporarily and gain a sense of control. Generally, as children gain experience with unfamiliar people, shyness wanes. In the absence of other difficulties, shy children have not been found to be significantly at-risk for psychiatric or behavior problems (Honig, 1987). In contrast, children who exhibit extreme shyness which is neither context-specific nor transient may be at some risk. Such children may lack social skills or have poor self-images (Sarafino, 1986). Shy children have been found to be less competent at initiating play with peers. School-age children who rate themselves as shy tend to like themselves less and consider themselves less friendly and more passive than their non-shy peers (Zimbardo and Radl, 1981). Such factors negatively affect others' perceptions. Zimbardo reports that shy people are often judged by peers to be less friendly and likeable than non-shy people. For all these reasons, shy children may be neglected by peers, and have few chances to develop social skills. Children who continue to be excessively shy into adolescence and adulthood describe themselves as being more lonely, and having fewer close friends and relationships with members of the opposite sex, than their peers.

### Strategies for Helping a Shy Child

1. *Know and Accept the Whole Child.* Being sensitive to the child's interests and feelings will allow you to build a relationship with the child and show that you respect the child. This can make the child more confident and less inhibited.
2. *Build Self-esteem.* Shy children may have negative self-images and feel that they will not be accepted. Reinforce shy children for demonstrating skills and encourage their autonomy. Praise them often. "Children who feel good about themselves are not likely to be shy" (Sarafino, 1986, p. 191).
3. *Develop Social Skills.* Reinforce shy children for social behavior, even if it is only parallel play. Honig (1987) recommends teaching children "social skill words" ("Can I play, too?") and role playing social entry techniques. Also, opportunities for play with young children in one-on-one situations may allow shy children to become more assertive (Furman, Rahe, and Hartup, 1979). Play with new groups of peers permits shy children to make a fresh start and achieve a higher peer status.
4. *Allow the Shy Child to Warm Up to New Situations.* Pushing a child into a situation which he or she sees as threatening is not likely to help the child build social skills. Help the child feel secure and provide interesting materials to lure him or her into social interactions (Honig, 1987).
5. *Remember That Shyness Is Not All Bad.* Not every child needs to be the focus of attention. Some qualities of shyness, such as modesty and reserve, are viewed as positive (Jones, Cheek, and Briggs, 1986). As long as a child does not seem excessively uncomfortable or neglected around others, drastic interventions are not necessary.

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ERIC Digest

# Training Day Care Providers

**Brenda Krause Eheart**

As more mothers of young children participate in the work force, the provision of quality day care is rapidly becoming a major concern for early childhood educators, researchers, policymakers, employers, and parents. A key to quality day care is the provision of specific training in child care for caregivers. Both the National Day Care Study (Ruopp, Travers, Glantz, & Coelen, 1979) and the National Day Care Home Study (NDCHS) (Divine-Hawkins, 1981) conclude that training is a powerful index of competence for caregivers and is strongly and positively linked to program quality. While few would dispute the conclusions, there are debates to be resolved related to day care training issues.

## Defining Training

Before training can be implemented effectively, a common understanding of what is meant by day care training is needed. Authors of the NDCHS concluded, "The specifics of training proved to be one of the most difficult dimensions of professionalism to tap" (Singer, Fosburg, Goodson, & Smith, 1980, p. 173). Precise variables to assess the type, intensity, and duration of training have not been constructed. Consequently, we know very little about what types of training can be most effective in promoting children's development in day care programs.

## Training Credentials

In developing clearer and more precise definitions of training, we are confronted with issues related to credentialing. Day care teachers are employed primarily in two settings: day care centers and day care homes. Recently, however, they have begun to work in public school early childhood programs. Do day care home providers need the same training as center-based caregivers? Does the training of prekindergarten teachers need to differ from that of center- or home-based caregivers and, if so, how? Currently there are no answers to these important questions.

Also at issue is the establishment of uniform, enforceable regulations. At present there are no uniform standards for prekindergarten teacher qualifications. Many argue that there is variation in the enforcement of regulations and that 100 percent compliance is an unrealistic expectation. Krause Eheart and Leavitt (1986) argue, however, that legislating training requirements is one strategy to offset problems of enforcement and compliance. They write:

> It does this in two ways. First, it can be assumed that trained caregivers are providing at least minimal levels of quality care, and second, as is not the case for other licensing standards, the concepts of compliance and enforcement do not apply to training once it has been implemented. (p. 130).

Without an appropriate, uniform, and enforceable credentialing system the professional status of day care workers will remain in question.

## Teaching Approaches

An issue closely tied to credentialing is how preschool age children should be taught. Is a didactic, teacher-directed approach more effective, or is a child-centered approach where the teacher's primary responsibility is to be responsive and supportive better? Equally debated is what children should be taught. Should programs emphasize basic academic skills, or should they provide experiences that emphasize growth in all developmental areas: physical, social, emotional, and intellectual?

Powell (1986), in a review of program models and teaching practices, concludes that there may not be one best approach to teaching young children. He suggests that we need to "focus on finding the best match between child and program" (p. 66). Clearly, as we learn more about effective teaching practices to be used with preschoolers, our teacher training programs will change.

## Amount of Training

The issues of teaching approaches and credentialing lead to the question of how much specialized training is necessary for day care teachers. The answer depends, in part, on whether discussion is focused on child care based in centers, homes, or public schools.

Most early childhood educators agree that college-level preparation in early childhood or child development, with supervised experience working with young children, is essential background for center staff

(NAEYC Position Statement, 1986). Currently, however, licensing requirements in only eight states legislate specialized training for preschool teachers (Young & Zigler, 1986). The amount of college-level preparation or the need to meet Child Development Associate (CDA) comptetency standards, when legislated, usually relates to day care positions as teaching assistants, teachers, or directors. Similarly, the National Academy of Early Childhood Programs, the accreditation division of NAEYC, has established a voluntary day care accreditation program which includes criteria for amount of training in relation to job titles and levels of responsibility.

What requirements are necessary for teachers of 4-year-olds in public schools? NAEYC strongly suggests that college-level preparation and experience is essential for achieving developmentally appropriate early childhood programs. Given this, how much preparation is necessary? It can be argued that if it is necessary to have four years of college training to teach 5-year-olds in the public schools, the same amount of training is necessary to adequately teach 4-year-olds. Many, however, have suggested that a degree from a child care training program in a community college is adequate preparation (*Federal Register*, 1985). Others, including Albert Shanker, president of the American Federation of Teachers, argue that early childhood teachers need less preparation than traditional four-year teacher certification and that differences in training, jobs, and roles imply different salaries (1986, p. 2).

Perhaps the most debated issue is the amount of training necessary for day care home providers. Family day care provides approximately two-thirds of the child care in the country, yet Krause Eheart and Leavitt (1986) found in an interview study of 150 providers that about one in every three providers had training and that more than half of the providers did not want training. Exacerbating this picture is the fact that 94 percent of all day care homes are unregulated. Day care home providers see themselves as women who love and care about children, but not as professionals. From their perspective, a love of children and lots of patience are necessary qualifications—training is not.

## Conclusion

Sixty years ago, there were 157 nursery schools, nationwide. Early childhood teachers did not need training to be considered effective because teaching was considered an inherent art (National Committee on Nursery School, 1929). Today, there are over 67,000 child care centers (National Association for the Education of Young Children, 1986) and at least 1.8 million family day care homes (estimated from the NDCHS in 1981), and training is recognized as essential to the provision of quality day care. This recognition has been accompanied by the emergence of many difficult issues related to training definitions, credentials, approaches, and amount of specialized training. With day care rapidly becoming an American institution (Phillips & Whitebook, 1986), these training issues must be addressed, questions answered, and conflicts resolved. Only then can our children be assured of a quality day care experience.

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ERIC Digest

# What Should Young Children Be Learning?

### Lilian G. Katz

Recent research on intellectual and social development and learning is rich in implications for curriculum and teaching strategies for early childhood education. Unfortunately, educational practices tend to lag behind what is known about teaching and learning. This digest discusses curriculum and the methods of teaching which best serve children's long-term development.

## The Nature of Development

The concept of development includes two dimensions: the normative dimension, concerning the capabilities and limitations of most children at a given age, and the dynamic dimension, concerning the sequence and changes that occur in all aspects of the child's functioning as he grows. It also addresses the cumulative effects of experience. While the normative dimension indicates what children can and cannot do at a given age, the dynamic dimension raises questions about what children should or should not do at a particular time in their development in light of possible long-term consequences.

In many preschool programs and kindergartens, young children are engaged in filling out worksheets, reading from flash cards or reciting numbers in rote fashion. But just because young children can do those things, in a normative sense, is not sufficient justification for requiring them to do so. Young children usually do willingly most things adults ask of them. But their willingness is not a reliable indicator of the value of an activity. The developmental question is not, What can children do? Rather it is, What should children do that best serves their development and learning in the long term?

## Learning Through Interaction

Contemporary research confirms the view that young children learn most effectively when they are engaged in interaction rather than in merely receptive or passive activities. Young children should be interacting with adults, materials and their surroundings in ways which help them make sense of their own experience and environment. They should be investigating and observing aspects of their environment worth learning about, and recording their findings and observations through talk, paintings and drawings. Interaction that arises in the course of such activities provides a context for much social and cognitive learning.

## Four Categories of Learning

The four categories of learning outlined below are especially relevant to the education of young children:

- Knowledge. In early childhood, knowledge consists of facts, concepts, ideas, vocabulary, and stories. A child acquires knowledge from someone's answers to his questions, explanations, descriptions and accounts of events as well as through observation.
- Skills. Skills are small units of action which occur in a relatively short period of time and are easily observed or inferred. Physical, social, verbal, counting and drawing skills are among a few of the almost endless number of skills learned in the early years. Skills can be learned from direct instruction and improved with practice and drill.
- Feelings. These are subjective emotional states, many of which are innate. Among those that are learned are feelings of competence, belonging, and security. Feelings about school, teachers, learning and other children are also learned in the early years.
- Dispositions. Dispositions can be thought of as habits of mind or tendencies to respond to certain situations in certain ways. Curiosity, friendliness or unfriendliness, bossiness, and creativity are dispositions or sets of dispositions rather than skills or pieces of knowledge. There is a significant difference between having writing skills and having the disposition to be a writer.

Dispositions are not learned through instruction or drill. The dispositions that children need to acquire or to strengthen—curiosity, creativity, cooperation, friendliness—are learned primarily from being around people who exhibit them. It is unfortunate that some dispositions, such as being curious or puzzled, are rarely displayed by adults in front of children.

A child who is to learn a particular disposition must have the opportunity to behave in a manner that is in keeping with the disposition.

When that occurs, the child's behavior can be responded to, and thus strengthened. Teachers can strengthen certain dispositions by setting learning goals rather than performance goals. A teacher who says, "I want to see how much you can find out about something," rather than, "I want to see how well you can do," encourages children to focus on what they are learning rather than on their performance, and how others will judge their performance.

### Risks of Early Academic Instruction

Research on the long-term effects of various curriculum models suggests that the introduction of academic work into the early childhood curriculum yields good results on standardized tests in the short term, but may be counterproductive in the long term. For example, the risk of early instruction in beginning reading skills is that the amount of drill and practice required for success at an early age will undermine children's dispositions to be readers. It is clearly not useful for a child to learn skills if, in the process of acquiring them, the disposition to use them is lost. On the other hand, obtaining the disposition without the requisite skills is not desirable either. Results from longitudinal studies suggest that curricula and teaching methods should be designed to optimize the acquisition of knowledge, skills, desirable dispositions and feelings.

Another risk of introducing young children to academic work prematurely is that those who cannot relate to the tasks required are likely to feel incompetent. Students who repeatedly experience difficulties may come to consider themselves stupid and may bring their behavior into line accordingly.

### Variety of Teaching Methods

Academically focused curricula for preschool programs typically adopt a single pedagogical method dominated by workbooks, drill and practice. It is reasonable to assume that when a single teaching method is used for a diverse group of children, a significant proportion of these children are likely to fail. The younger the children are, the greater the variety of teaching methods there should be, since the younger the group is, the less likely the children are to have been socialized into a standard way of responding to their environment, and the more likely it is that the children's readiness to learn is influenced by background experiences which are idiosyncratic and unique.

For practical reasons there are limits to how varied teaching methods can be. It should be noted, however, that while approaches dominated by workbooks often claim to individualize instruction, they really individualize nothing more than the day on which a child completes a routine task. Such programs can weaken the disposition to learn.

As for the learning environment, the younger the children are, the more informal it should be. Informal learning environments encourage spontaneous play and cooperative effort. In spontaneous play, children engage in whatever play activities interest them. Cooperative effort occurs when children engage in such activities as group projects, investigations, and constructions.

### Conclusion

Spontaneous play is not the only alternative to early academic instruction. The data on children's learning suggests that preschool and kindergarten experiences require an intellectually oriented approach in which children interact in small groups as they work together on projects which help them make sense of their own experience. These projects should also strengthen their dispositions to observe, experiment, inquire, and examine more closely the worthwhile aspects of their environment.

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Short Report

# Assessing Preschoolers' Development

PARENTS OFTEN ASK how they can tell if their children's development is proceeding "normally." Preschool teachers and day care workers also ask for guidelines to help assess their pupils' progress. To address this problem, Dr. Lilian G. Katz and her coauthors suggest that one way of getting a good picture of whether a child's development is going well is by looking carefully at his or her behavior along the eleven dimensions outlined below.* One word of caution, however: the authors urge that any judgments about a child's progress should be made not on the basis of one or two days of observation, but rather on a longer period. A good general rule is that one week of observation for each year of the child's life will be sufficient for making an initial assessment. For example, if the child is three years old, observations should be conducted over a period of three weeks; four years old, for four weeks; and so forth.

**Sleeping**

Does the child fall asleep and wake up rested, ready to get on with life? While occasional restlessness, nightmares, or grouchy mornings are normal, an average pattern of deep sleep resulting in morning eagerness is a good sign that the child finds life satisfying.

**Eating**

Does the child eat with appetite? Skipping meals or refusing food on occasion is normal; sometimes the child is too busy with other activities to welcome mealtime or perhaps is more thirsty than hungry at a given moment. However, a child who over a period of weeks eats compulsively or who constantly fusses about the menu is likely to have "got off on the wrong foot." The purpose of eating should be to fuel the system adequately in order to be able to get on with life; food should not dominate adult/child interaction. Keep in mind that children, like many adults, may eat a lot at one meal and hardly anything at the next. These fluctuations do not warrant comment or concern as long as there is reasonable balance in the nutrition obtained.

**Toilet Habits**

On the average, over a number of weeks, does the child have bowel and bladder control? The random "accident" is no cause for alarm, especially if there are obvious mitigating circumstances, such as excessive intake of liquids, intestinal upset, or simply absorbtion in ongoing activities to the point of disregarding such "irrelevancies." Persistent lack of control, on the other hand, may suggest the need for adult intervention.

**Range of Affect**

Does the child exhibit a range of emotions: joy, anger, sorrow, excitement, and so forth? A child whose emotions are of low intensity or whose affect is "flat" or unfluctuating—always angry, always sour, always cheerful and enthusiastic—may be having difficulties. Within a range of emotions, the capacity for sadness, to use one example, indicates the ability to make use of correlate emotions: attachment and caring. Both are important signs of healthy development; the inability to experience them may signal the beginning of depression.

**Variations in Play**

Does the child's play vary over a period of weeks, with the addition of some new elements even though he or she may play with many of the same toys or materials? Increasing elaboration of the same play activities or engagement in a wide variety of activities indicates sufficient inner security to manipulate (literally, to "play with") the environment. If a child stereotypically engages in the same sequence of play, using the same elements in the same ways, he or she may be emotionally "stuck in neutral" and may be in need of temporary help.

**Curiosity**

Does the child occasionally exhibit curiosity and even mischief? A child who never pokes at the environment or never snoops into new territory—perhaps in fear of punishment or as a result of the over-development of conscience—may not be developing optimally. Curiosity signals a healthy search for boundaries.

**Acceptance of Authority**

Does the child usually accept adult authority? Although the inability to yield to adults may constitute a problem, occasional resistance, assertion of personal-desires, or expression of objections indicates healthy socialization. Always accepting adult demands and restrictions without a word may suggest excessive anxiety, fear, or perhaps a weakening of self-confidence.

**Friendship**

Can the child initiate, maintain, and enjoy a relationship with one or more other children? Playing alone some of the time is fine as long as the child is not doing so because of insufficient competence in relating to others. However, chronic reticence in making friends may create difficulties in the development of social competence or relationship building later on, and is cause for concern.

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*Written while Dr. Katz was Fulbright Visiting Professor, the paper "Assessing Preschoolers' Development" is coauthored by staff members of the Department of Child Development, Faculty of Home Science, M.S., University of Baroda, Gujarat, India. The full text of the paper from which this short report has been derived is available in ERIC as ED 226 857.

### Interest

Is the child capable of sustained involvement and interest in something outside of himself or herself? Does the child's capacity for interest seem to be increasing to allow longer periods of involvement in activity, games, or play? The emphasis here is on "activities" rather than "passivities," such as television watching. A tendency toward increasing involvement in activities requiring a passive role or the persistent inability to see a project to completion may signal difficulties requiring adult intervention.

### Spontaneous Affection

Does the child express spontaneous affection for one or more of those with whom he or she spends time? While demonstrations of affection vary among families and cultures, a child whose development is going well is likely on occasion to let others know that they are loved and to express the feeling that the world is a gratifying place. Excessive expressions of this kind, however, may signal doubts about the strength of attachment between adult and child, and may call for consideration.

### Enjoyment of the "Good Things of Life"

Is the child capable of enjoying the potentially "good things of life," such as playing with others, going on picnics, exploring new places, and so forth? A child may have a specific problem—fear of insects or food dislikes, for example—but if the problem does not prevent the child from participating in and enjoying life, then it is reasonable to assume it will be outgrown.

The first three dimensions of development—sleeping, eating, and toilet habits—are particularly sensitive indicators of the child's development, since these the child alone controls. The remaining dimensions, more culture-bound and situationally determined, are still of great value in evaluation, since they are likely to represent important goals held for the child by both parents and teachers.

While the dimensions outlined above provide a useful place to begin in evaluating preschoolers' development, it is important to note that difficulties in any one of these categories, or even in several, are not automatic cause for alarm. Such problems should not be interpreted as signaling an irreversible trend; indeed, temporary difficulties often help those close to the child to understand when the child's situation does not match his or her emerging needs, thus assisting in the process of helping the child "get back on the right foot."

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ERIC
Digest

# Developing Homework Policies

Recent reports on excellence in education recommend that teachers increase the amount of homework they assign and that school administrators establish demanding homework requirements. This Digest discusses various types of homework assignments and examines research findings about the effectiveness and amount of homework assigned to American schoolchildren. It also examines some of the policies presently being discussed by school districts.

## What Is Homework?

Homework is the out-of-class tasks that a student is assigned as an extension of classroom work. Three types are commonly assigned in the United States: practice, preparation, and extension (LaConte 1981).

*Practice assignments.* Practice assignments reinforce newly acquired skills or knowledge. Students who have learned about a particular chemical reaction, for instance, may be asked to find examples of the reaction in their own environment. These assignments are most effective when carefully evaluated by the teacher, when matched to the ability and background of the individual student, and when students are asked to apply recent learning directly and personally.

*Preparation assignments.* Intended to provide background information, these assignments can include readings in the class text, library research, collecting materials for a class demonstration, and other activities requiring the gathering or organizing of information before a class discussion or demonstration.

Effective preparation includes guidelines on why and how the assignment should be completed. In addition, accurately estimating a task's level of difficulty and coordinating the assignment of difficult homework among various courses may help teachers avoid overburdening students.

*Extension assignments.* These assignments encourage individualized and creative learning by emphasizing student initiative and research. Frequently long-term continuing projects that parallel classwork, extension assignments require students to apply previous learnings.

## How Useful Is Homework?

The literature examining the relationship between homework and academic achievement is basically inconclusive. No studies have been able to control the many variables that affect this relationship (LaConte 1981; Knorr 1981; and McDermott and others 1984). Nevertheless, reviews of students', teachers', and parents' perceptions reveal that all believe homework helps students achieve better grades.

In addition, some recent studies have uncovered a more positive relationship between homework and student performance. For example,

- Increased homework time resulted in higher grades for high school seniors of all ability levels. Moreover, through increased study, lower-ability students achieved grades commensurate with those of brighter peers (Keith 1982).
- One to 2 hours of homework a day were associated with the highest levels of reading performance for 13-year-olds. For 17-year-olds, reading performance increased as the amount of time spent on homework increased. Students spending more than 2 hours a night on homework showed the highest performance levels (Ward and others 1983).
- Schools that assigned homework frequently showed higher student achievement levels than did schools that made little use of homework (Rutter and others 1979).

Rather than rely on conflicting research findings, school districts might more profitably determine whether homework, as they define and construct it, meets school and district educational objectives (Knorr 1981).

## How Much Homework Is Assigned/Completed?

Although researchers generally agree that the amount of homework increases significantly as students progress through school, their findings do not agree about the number of homework hours assigned or completed by American students. The issue is further complicated because the amount of homework assigned or performed varies according to gender and grade level of student and according to type of school.

Many homework studies focus on the upper grade levels. However, a recent survey conducted by the United States Bureau of the Census (1984) reports that, at the elementary level, public school students spend 4.9 hours and private school students spend 5.5 hours a week on homework. The survey also reported that girls do more homework than boys and that Blacks and Hispanics do more than Whites. High school students reported doing almost 7 hours of homework a week, ranging from 6.5 hours for public school students to 14.2 hours for private school students. The report attributes the difference to the college-preparatory orientation of many private schools and the more diverse nature of public schools.

### How Are Some School Districts Implementing Recommendations for Increased Homework?

Many school districts have developed local programs and policies to answer the call for increased homework issued by education commissions. For example, Frank J. Macchiarola, Chancellor of New York City Schools, presented a citywide homework policy to principals and community school superintendents. The chancellor's regulation set a minimum nightly homework policy to be monitored by principals. These nightly minimums range from 20 minutes for first and second grades to 2 hours for ninth through twelfth grades. The objective of the policy is to reinforce the lessons taught in the classroom, stimulate further interest in the topics taught, and develop independent study skills ("Homework Minimum" 1983).

On the other hand, in Maryland, the Montgomery County School Board of Education rejected a proposal to increase the time high school students spend on homework. The proposal would have required a minimum of 3 hours of homework a week in all classes. Those voting against the proposal objected that no numbers were available on the amount of homework Montgomery County students were assigned and said that the teacher, not the school board, should decide how much homework to assign ("Montgomery County School Board" 1984).

### What Issues Should Be Considered When Developing Homework Policies?

The homework issue raises many recurring questions, among them the following:

What kind of homework is most effective?

How much homework is appropriate?

At what age is homework a useful learning tool?

Who is responsible for deciding how much homework to assign?

Who is responsible for monitoring homework?

While these questions are unlikely to be answered in the same way in all schools and school districts, what can be said is that individualized homework assigned to appropriate grade levels seems to help students develop the disciplined study habits that result in increased scholastic achievement.

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# Full-Day or Half-Day Kindergarten?

According to educator Barry Herman (1984) and others, the majority of 5-year-olds in the United States today already are more accustomed to being away from home much of the day, more aware of the world around them, and more likely to spend a large part of the day with peers than were children of previous generations. These factors, plus the demonstrated ability of children to cope with a longer day away from home, have created a demand in many communities for full-day kindergarten programs.

This Digest examines how changing family patterns have affected the full-day/half-day kindergarten issue, discussing why schools are currently considering alternative scheduling and describing the advantages and disadvantages of each type of program.

**Changes in Family Patterns**

Among the changes occurring in American society that make full-day kindergarten attractive to families are

*An increase in the number of working parents.* As reported by the National Center for Education Statistics (Grant and Snyder 1983), the number of mothers of children under 6 who work outside the home increased 34 percent from 1970 to 1980. The National Commission on Working Women (1985) reports that, in 1984, 48 percent of children under 6 had mothers in the labor force.

*An increase in the number of children who have had preschool or day care experience.* Since the mid-1970s, the majority of children have had some kind of preschool experience, either in Head Start, day care, private preschools, or early childhood programs in the public schools. These early group experiences have provided children's first encounters with daily organized instructional and social activities before kindergarten (Herman 1984).

*An increase in the influence of television and family mobility on children.* These two factors have produced 5-year-olds who are more knowledgable about their world and who are apparently more ready for a full-day school experience than the children of previous generations.

*Renewed interest in academic preparation for later school success.* Even in families without both parents working outside the home, there is great interest in the contribution of early childhood programs (including full-day kindergarten) to later school success.

**Schools and Full-Day Kindergarten**

School systems have become interested in alternative scheduling for kindergarten partly because of the reasons listed above and partly for reasons related to finances and school space availability. Some of these reasons concern

*State school funding formulas.* Some states provide more state aid for all-day students, although seldom enough to completely pay the extra costs of full-day kindergarten programs. Other states allow only half-day aid; in these states, funding formulas would have to change in order for schools to benefit financially from all-day kindergarten attendance.

*Busing and other transportation costs.* Eliminating the need for noon bus trips and crossing guards saves the school system money.

*Availability of classroom space and teachers.* As school enrollment declines, some districts find that they have extra classroom space and qualified teachers available to offer full-day kindergarten.

In addition, school districts are interested in responding to parents' requests for full-day kindergarten. In New York City, for example, parents who were offered the option of full-day kindergarten responded overwhelmingly in favor of the plan ("Woes Plague New York's All-Day Kindergartens" 1983).

**Advantages of Full-Day Programs**

Herman (1984) describes in detail the advantages of full-day kindergarten. He and others believe full-day programs provide a relaxed, unhurried school day with more time for a variety of experiences, greater opportunity for screening and assessment to detect and deal with potential learning problems, and more occasions for good quality interaction between adults and students.

While the long term effects of full-day kindergarten are yet to be determined, Thomas Stinard's (1982) review of 10 research studies comparing half-day and full-day kindergarten indicates that students taking part in full-day programs demonstrate strong academic advantages as much as a year after the kindergarten experience. Stinard found that full-day students performed at least as well as half-day students in every study (and better in many studies) with no significant adverse effects.

A recent longitudinal study of full-day kindergarten in the Evansville-Vanderburgh, Ohio, School District indicates that fourth graders maintained the academic advantage gained during full-day kindergarten (Humphrey 1983).

Despite often-expressed fears that full-day kindergartners would experience fatigue and stress, school districts that have taken care to plan a developmentally appropriate, nonacademic curriculum with carefully paced activities have reported few problems (Evans and Marken 1983; Stinard 1982).

### Disadvantages of Full-Day Programs

Critics of full-day kindergarten point out that such programs are expensive because they require additional teaching staff and aides to maintain an acceptable child-adult ratio. These costs may or may not be offset by transportation savings and, in some cases, additional state aid.

Other requirements of full-day kindergarten, including more classroom space, may be difficult to satisfy in districts where kindergarten or primary grade enrollment is increasing and/or where school buildings have been sold.

In addition to citing added expense and space requirements as problems, those in disagreement claim that full-day programs may become too academic, concentrating on basic skills before children are ready for them. In addition, they are concerned that half of the day's programming in an all-day kindergarten setting may become merely child care.

### Advantages of Half-Day Programs

Many educators still prefer half-day, everyday kindergarten. They argue that a half-day program can provide high quality educational and social experience for young children while orienting them adequately to school.

Specifically, half-day programs are viewed as providing continuity and systematic experience with less probability of stress than full-day programs. Proponents of the half-day approach believe that, given the 5-year-old's attention span, level of interest, and home ties, a half day offers ample time in school and allows more time for the young child to play and interact with adults and other children in less-structured home or child care settings (Finkelstein 1983).

### Disadvantages of Half-Day Programs

Disadvantages of half-day programs include midday disruption for children who move from one program to another and, if busing is not provided by the school, difficulty for parents in making transportation arrangements. Even if busing is provided and the child spends the other half day at home, schools may find providing the extra trip expensive. In addition, the half-day kindergartner may have little opportunity to benefit from activities such as assemblies or field trips.

### Conclusion

While both full-day and half-day programs have advantages and disadvantages, it is worth noting that length of the school day is only one dimension of the kindergarten experience. Other important issues include the nature of the kindergarten curriculum and the quality of teaching. In general, research suggests that, as long as the curriculum is developmentally appropriate and intellectually stimulating, either type of scheduling can provide an adequate introduction to school.

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ERIC Digest

# PARENTS AND SCHOOLS

**Rhoda Becher**

Parent involvement is critical in facilitating children's development and achievement and in preventing or remedying educational and developmental problems. Declining achievement scores, rising educational costs, and distrust of bureaucratic institutions are among the factors which have refocused attention on the rights, responsibilities, and impact of parents.

This Digest discusses benefits, approaches used, and problems encountered when parents are involved in the schools. Also listed are principles for implementing successful parent involvement programs.

### Benefits to Children

Substantial evidence exists to show that children whose parents are involved in their schooling demonstrate advanced academic achievement and cognitive development (Andrews and others 1982; Henderson 1981; and Herman and Yeh 1980). The parent-child relationship is improved and parents more frequently participate in the child's activities. Parents also increase the number of contacts made with the school and their understanding of child development and the educational process. Another effect of parent-school cooperation is that parents become better teachers of their children at home and use more positive forms of reinforcement.

### Effects of Parent Involvement

Research reports indicate that parents involved in child care and educational programs develop positive attitudes about themselves, increase self-confidence, and often enroll in programs to enhance their personal development. They also are more positive about school and school personnel than uninvolved parents (Herman and Yeh 1980), help to gather community support for educational programs, and become more active in other community activities.

### Effective Approaches to Parent Involvement

Parent visits to the center, school, or classroom, parent meetings and workshops, and parent-teacher conferences are effective in encouraging parents' participation in their children's education. Written and verbal information from teachers on the program and the children's progress is also helpful (Herman and Yeh 1980; Meighan 1981; Seginer 1983).

Parents most enjoy participating in classroom activities, parent meetings, and policy planning sessions (McKinney 1980). They are most interested in meetings dealing with educational concerns or personal growth and development. Of less interest are meetings dealing with careers, job training, and social services. Somewhat surprisingly, social and fundraising activities were listed by parents as the least popular form of parent involvement.

### Problems in Involving Parents

Researchers found that teachers are sometimes reluctant to encourage parent involvement because they

- Are uncertain about how to involve parents and still maintain their role as specialized "experts."
- Are uncertain about how to balance their concern for the group of children against a more personalized concern for each individual child, which they believe would be expected if parents were more involved (McPherson 1972).
- Believe parent involvement activities take too much planning time, turn responsibility for teaching over to parents, and are disruptive because parents do not know how to work with children.
- Are concerned that parents may use non-standard English or demonstrate other undesirable characteristics.
- Question whether parents will keep commitments, refrain from sharing confidential information, and avoid being overly critical.

On the other hand, parents complain that the bureaucracy of the schools discourages their involvement and their expression of concerns, complaints, and demands.

### Characteristics of Successful Parent Involvement Programs

Despite difficulties, the proven benefits of parent participation result in continued interest in developing these programs. The following characteristics are a basis for developing, implementing, and evaluating successful parent involvement efforts. Included are assumptions about parents held by teachers and principals who operate successful programs and principles for implementing such programs.

### Assumptions Made about Parents

Successful programs emphasize the contributions parents already make to their children's development and education. As a result, parents feel good about themselves and the program and are more willing to become actively involved. In the belief that parents can make additional contributions, successful programs help parents identify other skills they can share.

Parents have important perspectives on their children and can provide the teacher with information about their child's relationships, interests, and experiences outside the school or center. This information enhances the teacher's understanding of the child and contributes to more effective teaching.

Whereas parent-child relationships are personal, subjective, and long-term, teacher-child relationships are objective, impersonal, and short term. Successful programs recognize these differences when suggesting home activities and view processes and activities from the perspective of the parents rather than from that of the staff.

Successful programs recognize that most parents care about their children. They may feel it is more important to spend an evening at home than to attend a meeting only distantly concerned with their child. Staff also believe parents are interested in learning parenting, developmental, and educational techniques.

Effective programs understand that parents have many reasons for their involvement, that they may have good intentions, and that they may not understand how to help. The staff takes care to clearly state objectives and ways for parents to work well with their child.

### Principles for Implementing Successful Programs

- Match goals, purposes, and activities.
- Realistically consider staff skills and available resources.
- Recognize variations in parents' skills.
- Respond to parent needs with flexible and creative program activities.
- Communicate expectations, roles, and responsibilities.
- Involve parents in decision making and explain administrative decisions to encourage parents to respond to decisions rationally.
- Expect problems but emphasize solutions. Because problems are anticipated, policies and procedures for resolving them are developed and communicated to parents. "Failure" is not blamed on the parents.
- Seek optimum versus maximum involvement. Parent involvement takes time, effort, and energy. If staff or parents become overextended, they may feel drained and resentful.

### Cautions and Concerns

Responsiveness to the following concerns may help to justify increasing optimism that parent involvement can improve education and educational opportunities for children.

- Continuous and increased emphasis on the crucial role of parents in facilitating development, achievement, and education can place excessive pressure and responsibility on parents.
- Little attention is given to the role of the father.
- The focus of educational responsibility should not shift toward the parent so much that schools, programs, and teachers fail to examine the ways in which *they* might change to more fully enhance children's development, education, and achievement.
- Parent involvement programs may antagonize teachers who already feel overwhelmed by responsibilities beyond the direct instructional role.

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Back collections of documents in all issues of **Resources in Education (RIE)** since 1966 are available on microfiche at a unit price of $0.82 per microfiche. The collections from 1966 through 1985 are furnished on a vesicular film base and without envelopes. Since 1986 collections are furnished on a Diazo film base without envelopes. SHIPPING CHARGES ARE EXTRA. For pricing information write or call Toll Free 1-800-227-ERIC (3742).

## SPECIAL COLLECTIONS

Special collections of early (1956 to 1969) Office of Education Reports are also available from EDRS. These are: Office of Education Research Reports 1956-65; Pacesetters in Innovation, Fiscal Year 1966; Pacesetters in Innovation, Fiscal Year 1967; Pacesetters in Innovation, Fiscal Year 1968; Selected Documents on the Disadvantaged; Selected Documents on Higher Education; Manpower Research, Inventory for Fiscal Year 1966 and 1967; Manpower Research, Inventory for Fiscal Year 1968; Manpower Research, Inventory for Fiscal Year 1969. Please write or call for prices and shipping charges.

## AIM/ARM MICROFICHE COLLECTIONS

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Back collections of, or standing order subscriptions for current collections of, microfiche of individual ERIC Clearinghouses are available. Please write or call for prices and shipping charges.

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# The ERIC System

## What is ERIC?

ERIC is a nationwide information system funded by the Office of Educational Research and Improvement. ERIC makes information on all aspects of education readily available. ERIC covers such subjects as child development, classroom techniques, reading, science, social studies, mathematics, career education, counseling, adult education, rural and urban education, teacher education, educational administration, special education, testing, and higher education.

## Who can use ERIC?

You can--whether you are a teacher, researcher, librarian, student, legislator, parent, or anyone else who is interested in information related to education.

## Where is ERIC?

More than 700 libraries and other institutions in the U.S. and other countries have the ERIC document collection on microfiche. Write to ERIC/EECE* for a list of the ERIC collections in your state. Many more institutions subscribe to the printed indexes for the ERIC collection.

## What is in ERIC?

When you use ERIC, you can find citations to:

| | |
|---|---|
| ERIC Documents - | primarily unpublished or "fugitive" materials, including more than 220,000 research studies, program descriptions and evaluations, conference proceedings, curriculum materials, bibliographies, and other documents. |
| ERIC Journals - | articles in more than 750 education-related journals. |

## How do I use ERIC to find citations?

| | |
|---|---|
| ERIC Documents - | Use ERIC's monthly abstract journal Resources in Education (RIE). RIE includes subject, author, and institution indexes and gives you an abstract of each cited document. |
| ERIC Journals - | Use ERIC's other monthly publication Current Index to Journals in Education (CIJE). CIJE lists about 1800 new journal citations each month and includes a short annotation for most articles cited. |

Prepared by the ERIC Clearinghouse on Elementary and Early Childhood Education (ERIC/EECE). *ERIC/EECE address and phone number are on the back of this page.

### What if I want to read a document or journal article cited in RIE or CIJE?

ERIC Documents - The complete text of most ERIC documents is available on "microfiche" (a 4 x 6 inch card of microfilm) which must be read on a microfiche reader. Libraries and other institutions which have the ERIC collection have microfiche readers. Many institutions also have microfiche reader-printers that can make paper copies from the microfiche.

ERIC Journals - To read the article from a CIJE citation, you look up the journal in your library or ask your librarian to borrow it for you. (Articles cited in CIJE are not available on microfiche.)

### How can ERIC materials be ordered?

ERIC Documents - Most ERIC documents can be ordered from the ERIC Document Reproduction Service (EDRS) in Alexandria, Virginia. You can write ERIC/EECE for an order form or use the one in each RIE issue.

ERIC Journals - About 75% of the journal articles cited in CIJE can be ordered from University Microfilms in Ann Arbor, Michigan. Write ERIC/EECE for an order form or use the order information in CIJE.

### How can I search ERIC by computer?

One of the most efficient ways to use ERIC is to order a computer search of the ERIC data base on a particular topic. There are computer search services in many libraries and other institutions as well as at most ERIC Clearinghouses. To get a computer search, describe your topic to the person who will do the search; the search will then be designed and run through a computer. You will receive a printout with citations from RIE and from CIJE: a fee is usually charged for computer searches. Write any ERIC Clearinghouse for more information on search services in your state.

### How does information get into ERIC?

Sixteen ERIC Clearinghouses, in various locations across the U.S., collect and process ERIC documents for RIE and prepare citations for CIJE. Each Clearinghouse is responsible for a different subject area, such as elementary and early childhood education or teacher education.

### Do the Clearinghouses offer any other services?

The ERIC Clearinghouses offer various services including answering questions, searching ERIC by computer, and distributing mini-bibliographies, newsletters, and other publications. Check with individual Clearinghouses for details.

### How do I find out more about ERIC?

Contact the ERIC Clearinghouse on Elementary and Early Childhood Education or any other ERIC Clearinghouse. We will be happy to send you additional information on ERIC, RIE, CIJE, other ERIC Clearinghouses, computer searches, or document ordering. We can also send you a list of ERIC collections and institutions offering computer searches of ERIC in your geographical area.

ERIC Clearinghouse on Elementary and Early Childhood Education
College of Education
University of Illinois
805 W. Pennsylvania Ave.
Urbana, IL 61801 (217) 333-1386

ERIC **Ready Reference #7**
Revised May 1989

# ERIC Fact Sheet*

## I. Database Building

| | |
|---|---|
| A. Documents | |
| 1. Documents Evaluated Annually for Possible Addition to ERIC Database | 25,000 |
| 2. Documents Added to ERIC Database (*Resources in Education* file) | |
| a. Monthly (Average) | 1,040 |
| b. Annually (Current Level) | 12,500 |
| c. To Date (1966 through December 1988) | 290,038 |
| B. Journal Articles | |
| 1. Journal Titles Covered (i.e. regularly analyzed for education-related articles) | 780 |
| 2. Journal Articles Added to ERIC Database (*Current Index to Journals in Education* file) | |
| a. Monthly (Average) | 1,400 |
| b. Annually (Current Level) | 17,000 |
| c. To Date (1969 through December 1988) | 375,771 |
| C. Total Accessions in ERIC Database (1966-1988) | 665,809 |
| D. Organizations Contributing Documents to ERIC | |
| 1. Total to Date (1966-1988) | 31,000 |
| 2. Active Within Last Five Years | 12,000 |
| 3. Standing Acquisition Arrangements (Organizations Automatically Sending ERIC Their Documents) | 1,250 |

## II. Document Delivery

| | |
|---|---|
| A. Microfiche Production Activity | |
| 1. Titles Microfiched | |
| a. Monthly (per RIE issue) | 1,025 |
| b. Annually | 12,250 |
| 2. Microfiche Cards per Title (Average) | 1.4 |
| 3. Microfiche Cards Delivered per Subscriber | |
| a. Monthly (per RIE issue) | 1,435 |
| b. Annually | 17,000 |
| B. Sales Activity (from EDRS) | |
| 1. Standing Order Subscriptions for ERIC Microfiche | 800 |
| 2. Microfiche Cards Sold on Subscription (Annually) | 12,700,000 |
| 3. On-Demand Document Orders Processed Annually (Microfiche or Paper Copy) | 12,000 |
| C. ERIC Microfiche Collections Open to Public Access | |
| 1. Domestic | 780 |
| 2. Foreign | 111 |
| 3. Total | 891 |

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* Many of the statistics reported here are constantly changing and therefore have been rounded.

## III. Publications

| | |
|---|---|
| A. ERIC Clearinghouse Publications (all types) (1967-1988) | 5,203 |
| B. ERIC Digests (Highlights and syntheses of research findings on major topics) | |
| 1. Total ERIC Digests (through 1987) | 533 |
| 2. ERIC Digests Available Online | 320 |
| C. Abstract Journals | |
| 1. Subscriptions to *Resources in Education* (RIE) | 2,000 |
| 2. Subscriptions to *Current Index to Journals in Education* (CIJE) | 1,800 |

## IV. User Services

| | |
|---|---|
| A. Subscriptions to ERIC Magnetic Tapes | 40 |
| B. ERIC Information Service Providers | |
| 1. Offering Access to ERIC Microfiche | 891 |
| 2. Offering Computer Searches of ERIC Files | 500 |
| C. Inquiries/Questions Answered Annually | |
| 1. ERIC Facility | 3,000 |
| 2. Clearinghouses (16) | 115,000 |
| D. ERIC on CD-ROM Subscriptions (All Vendors)** | ~800 |
| E. ERIC Online Searching Usage (Connect Hours — All Vendors)*** | ~100,000 |

## V. Authority Lists

| | |
|---|---|
| A. *Thesaurus of ERIC Descriptors* | |
| Total Vocabulary Terms (as of 11th edition, 1987) | 9,459 |
| B. *Identifier Authority List* | |
| Total Identifiers (as of June 1987) | 41,149 |
| C. *Institutional Source Directory* (Complete) | |
| Organizations/Institutions Contributing Documents to the ERIC Database (as of March 1987) | 29,647 |
| D. Other Authority Lists | |
| a. Languages | 168 |
| b. Geographic Locations | 217 |
| c. Publication Types | 38 |
| d. Government Levels | 5 |
| e. Target Audiences | 11 |

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** A rapidly increasing number

*** Includes DIALOG, BRS, ORBIT, and Foreign Vendors

# ERIC Network Components

There are currently sixteen (16) ERIC Clearinghouses, each responsible for a major area of the field of education. Clearinghouses acquire, select, catalog, abstract, and index the documents announced in *Resources in Education (RIE)*. They also prepare interpretive summaries and annotated bibliographies dealing with high interest topics and based on the documents analyzed for *RIE;* these information analysis products are also announced in *Resources in Education.*

**ERIC Clearinghouses:**

**ADULT, CAREER, AND VOCATIONAL EDUCATION** (CE)
Ohio State University
Center on Education and Training for Employment
1900 Kenny Road
Columbus, Ohio 43210-1090
Telephone: (614) 292-4353; (800) 848-4815

**COUNSELING AND PERSONNEL SERVICES** (CG)
University of Michigan
School of Education, Room 2108
610 East University Street
Ann Arbor, Michigan 48109-1259
Telephone: (313) 764-9492

**EDUCATIONAL MANAGEMENT** (EA)
University of Oregon
1787 Agate Street
Eugene, Oregon 97403-5207
Telephone: (503) 686-5043

**ELEMENTARY AND EARLY CHILDHOOD EDUCATION** (PS)
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, Illinois 61801-4897
Telephone: (217) 333-1386

**HANDICAPPED AND GIFTED CHILDREN** (EC)
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091-1589
Telephone: (703) 620-3660

**HIGHER EDUCATION** (HE)
George Washington University
One Dupont Circle, N.W., Suite 630
Washington, D.C. 20036-1183
Telephone: (202) 296-2597

**INFORMATION RESOURCES** (IR)
Syracuse University
School of Education
Huntington Hall, Room 030
Syracuse, New York 13244-2340
Telephone: (315) 443-3640

**JUNIOR COLLEGES** (JC)
University of California at Los Angeles
Mathematical Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024-1564
Telephone: (213) 825-3931

**LANGUAGES AND LINGUISTICS** (FL)
Center for Applied Linguistics
1118 22nd Street, N.W.
Washington, D.C. 20037-0037
Telephone: (202) 429-9551

**READING AND COMMUNICATION SKILLS** (CS)
Indiana University
Smith Research Center
2805 East 10th Street
Bloomington, Indiana 47408-2373
Telephone: (812) 855-5847

**RURAL EDUCATION AND SMALL SCHOOLS** (RC)
Appalachia Educational Laboratory
1031 Quarrier Street
P.O. Box 1348
Charleston, West Virginia 25325
Telephone: (800) 624-9120

**SCIENCE, MATHEMATICS, AND ENVIRONMENTAL EDUCATION** (SE)
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1200 Chambers Road, Room 310
Columbus, Ohio 43212-1792
Telephone: (614) 292-6717

**SOCIAL STUDIES/SOCIAL SCIENCE EDUCATION** (SO)
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Social Studies Development Center
2805 East 10th Street
Bloomington, Indiana 47408-2373
Telephone: (812) 855-3838

**TEACHER EDUCATION** (SP)
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Washington, D.C. 20036-2412
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Washington, D.C. 20007-3893
Telephone: (202) 342-5060

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Columbia University
Teachers College
Main Hall, Room 300, Box 40
525 West 120th Street
New York, New York 10027-9998
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(Central ERIC)
Office of Educational Research and Improvement (OERI)
U.S. Department of Education
Washington, D.C. 20208-5720
Telephone: (202) 357-6289

**Centralized Database Management:**
**ERIC PROCESSING & REFERENCE FACILITY**
ARC Professional Services Group
2440 Research Boulevard, Suite 550
Rockville, Maryland 20850-3238
Telephone: (301) 590-1420

**Document Delivery:**

**ERIC DOCUMENT REPRODUCTION SERVICE (EDRS)**
Computer Microfilm Corporation
3900 Wheeler Avenue
Alexandria, Virginia 22304-6409
Telephone: (703) 823-0500; (800) 227-3742

**Commercial Publishing:**

**ORYX PRESS**
2214 North Central Avenue at Encanto
Phoenix, Arizona 85004-1483
Telephone: (602) 254-6156; (800) 457-6799

**Outreach:**
ACCESS ERIC
Aspen Systems Corp.
1600 Research Boulevard
Rockvillle, Maryland 20850-3166
(301) 251-5486; (800) 873-3742

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